INTERNATIONAL HANDBOOK OF

Historical Archaeology

TERESITA MAJEWSKI • DAVID GAIMSTER
Editors

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International Handbook of Historical Archaeology

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Teresita Majewski · David Gaimster
Editors

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Dedicated to the memories of my parents, Thelma F. Majewski (1906–1996) and Bernard L. Majewski (1895–1967), whose spoken and unspoken life lessons have been invaluable for me.

Teresita Majewski

Dedicated to the memory of Rev. Leslie R. Gaimster (1914–2002) for all his encouragement and inspiration.

David Gaimster

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Introduction

David Gaimster and Teresita Majewski

"Historical archaeology" is one of the most fast-changing and dynamic fields of study in the archaeological discipline. This collection of essays by researchers and practitioners from around the world charts the field's progress since its inception half century ago on a European colonial sites along the Atlantic seaboard of North America to the emergence of a truly global inquiry into the making of modern society. The 35 reviews and case studies in this compendium provide a wide-ranging snapshot of the subject today, which is breaking boundaries on many different levels, from geographical and temporal to methodological and theoretical. After 50 years, this first handbook for the discipline reveals the arrival at the beginning of the twenty-first century of a maturing and distinctive interdisciplinary study of historical material culture spanning societies and communities in almost every corner of the globe.

This handbook does not deal only with the archaeology of literate societies, as some have previously defined "historical archaeology." Such a definition is both too narrow and too broad for us to apply to the material study of most past and indeed contemporary societies around the world. Besides, historical archaeology is a vehicle for exploring those communities that had no access to writing and that leave no conventional documentary record of their experiences, however significant. In contrast to prehistorians, the greatest challenge for historical archaeologists is to make sense of the vast quantities and the sheer diversity of the documentary and material remains of historical societies. The aim of the handbook, therefore, takes the now widely acknowledged definition of world historical archaeology as its main focus, as put forward by Charles E. Orser, Jr., in various publications (e.g., Orser, 2002). The papers collected here reveal current and diverse approaches to the archaeology of those societies developing in the wake of the European Middle Ages (where the Reformation, mercantile capitalism, and industrialization all ruptured the previous order of things) and of those emerging in regions of the world that were colonized by Europeans and that developed along a new multiethnic trajectory. This handbook is devoted therefore to the Postcolumbian or post-Quincentennial archaeology of Europe and the world, or should we say Europe *in* the world. While accepting the Eurocentricity or transatlantic emphasis of this "archaeology of cultural entanglement," many of the contributors to the handbook also contest it. Several demonstrate how the boundaries of this emerging discipline are being pushed back still further to accommodate those societies that were not touched significantly by European expansion or those that enjoyed long-distance interactions outside of European networks.

The acceptance of the term "historical archaeology" has ironically been more problematic for Europeans, who have found difficulties in drawing clear boundaries between the medieval, post-medieval, and contemporary worlds. In Britain, the discipline of "post-medieval archaeology," which was institutionalized in the formation of the Society for Post-Medieval Archaeology in 1966, has traditionally taken the mid-fifteenth century as its starting point and the mid-eighteenth century as its terminus. Since the 1960s, the periodization debate has swung one way and then the other. More recently, thanks to a series of major conferences on the medieval to early modern transition, industrialization, and the archaeology of the Reformation, a temporally less constrained view of post-medieval archaeology has emerged, one that recognizes the primacy of archaeological chronology and diverse aspects of change and continuity between the late Middle Ages and the present day. A growing interest in the archaeology of the nineteenth and twentieth centuries, an increasing focus on historical issues and themes, and the identification of synergies between the "historical" and the "contemporary" or "familiar past" have all helped to obscure the boundaries between the past, the present, and the archaeological record. Perhaps the term "post-medieval archaeology" now does an injustice to an expanding and increasingly pluralistic discipline in British and European archaeology, which can no longer define itself in terms of reference to another period in European history. In contrast, the term "historical archaeology" better accommodates all the pulses and new directions of the study of modern European society and its material culture.

Where once there were divided methods of operation, with Europeans working in a historical tradition and Americans largely influenced by anthropology, historical archaeology has become today both anthropological *and* historical, one common point of interest being the point of accord or tension between artifacts and texts. Now operating in a predominantly anthropological interpretive framework, the focus of most current practitioners is the interrogation of past human behavior and the identification of traits in that behavior that are indicative of the emergence of modern society. To achieve this, historical archaeologists are active in all the varied specializations of modern archaeology, from landscape mapping, buildings recording, and the maritime sphere to artifact analysis, materials science, funerary studies, and forensics. Given the nature of the diverse evidence available, they are forced to work at a level of interdisciplinarity rare in other fields of archaeology or historical investigation. The growth of cultural resource management, or heritage management, throughout the world has provided a major impetus for this trend. Historical archaeologists also possess that vital flexibility to operate at the macro- and micro-scales of world and local history, from the broad, international sweep, to the household and the personal sphere. Moreover, they are able to place a local discovery into a world matrix of colonialism, capitalism, imperialism, and the like. The discipline, as these studies capture, is one that is able to offer a material perspective on key historical questions, definitions, and issues of the modern world through the investigation of sites, monuments, objects, and landscapes.

The plurality or hybridism of world historical archaeology can be observed in this collection of 35 essays by leading authorities in their respective fields. Together they provide a snapshot of the two emerging cultures of "historical archaeology," as identified recently by Dan Hicks and Mary Beaudry (2006), those being a materials-based science and an interpretive, theoretical field

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concerned with meaning. The chapters certainly combine material and "non-material" concerns, and all address the broader historical narratives of the post-Quincentennial era. At times, researchers are inspired by the critical voices of other archaeological practitioners or by the public. Project stakeholders often challenge us to examine and question our assumptions and free us up to try something innovative. Since the subject matter of the discipline spans so much of the recent or even "familiar" past, several also consider the growing threat to historical archaeological resources around the world from development and industrialization, particularly in developing nations and under the sea (where in international waters there is no effective protection from commercial salvage). But even in the developed world, protective legislation is often weaker in relation to historical archaeological sites, landscapes, and artifacts, and rarely enforced. This handbook attempts for the first time to map those resources and their potential for local economic sustainability before they are lost forever.

The handbook is a game of two halves. The first half contains 20 essays addressing past and current approaches together with a comprehensive set of dedicated discussions of key interpretive issues in world historical archaeology. The key approaches and subfields of world historical archaeology are addressed, from landscape, environmental, forensic, maritime, and industrial archaeology, to ethnohistory, frontier sites, artifact analysis, and mortuary studies. The interpretive essays address all the defining traits of modern society and its material expression, from class, race, gender, and identity, to colonialism and postcolonialism, consumerism, and theory in historical archaeology. The second half of the handbook contains 15 complementary case studies dedicated to the emergence and current practice of historical archaeology across the globe. Contributions range from synoptic treatments of national historical archaeologies in the United States, South America, Mesoamerica, Central America, New Spain in North America and the Pacific, Canada, northern Europe, Britain, sub-Saharan Africa, the Caribbean, the French colonial sphere, the African Diaspora in North and South America, Australasia, and the Ottoman Empire to studies of key regions of world importance for the subject, such as La Florida. Each contribution carries an extensive bibliography designed to equip the undergraduate, postgraduate, practicing archaeologist, and interested reader from complementary disciplines with key reference information on each subject.

The bias in the nationality of the handbook's authors reflects, to a degree, the current geographical strengths and weaknesses of the field. The handbook has its origin in the United States, where both its original editors were located. It follows that of the 45 authors represented in the volume, 34 are based in the United States. In addition to these, 3 authors are based in the United Kingdom, while 4 are based in Latin America, 1 in Canada, 1 in South Africa, and 2 in Australia. Of the 12 geographical case studies on historical archaeology outside the United States, scholars based at American universities provide 6 of that number. Besides the absence of local contributors on key regions where historical archaeology has grown in importance in recent years, the geographical gaps in the volume are equally illuminating. Perhaps the transatlantic Postcolumbian paradigm is an inappropriate framework for Asian or Far Eastern archaeologists! Here, independent long-distance commercial and cultural exchanges preceded and continued long after initial contact with Europeans. Should this project be undertaken again in the decade or so, it will be instructive to observe how far the notion of

historical archaeology has been taken up in those parts of the world that are touched on only relatively marginally in this volume. A revised handbook should contain a significantly greater number of contributions on sub-Saharan Africa, for instance. It is the belief of both editors that as the history of the colonial experience and of the forging of new nations becomes increasingly important to national identity in the next few decades, the historical archaeology of those regions will also grow in its relevance.

The handbook is a child of the mid-1990s and has taken over 10 years in gestation. In such a large compendium, the content has been prepared and collated in a series of phases, some inevitably a while ago while other contributions have the benefit of being prepared only a short time before publication. As a first attempt at bringing so much knowledge together, the end result is no less useful for that.

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Part I
Themes, Issues, and Approaches

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A North American Perspective on Race and Class in Historical Archaeology

Jamie C. Brandon

Introduction

When Hurricane Katrina struck the Gulf Coast in August of 2005, it became one of the most costly and deadly storms in American history. It also, although briefly, highlighted the often muted importance of inequality in our society and started a discussion about race and class in the American mainstream media. An analysis of damage data shows that the storm's impact was disproportionately borne by the region's African American communities, by people who rented their homes, and by the poor and unemployed (Logan, 2006). "It takes a hurricane," wrote senior editor and *Newsweek* columnist Jonathan Alter:

> It takes a catastrophe like Katrina to strip away the old evasions, hypocrisies and not-so-benign neglect. It takes the sight of the United States with a big black eye—visible around the world—to help the rest of us begin to see again. For the moment, at least, Americans are ready to fix their restless gaze on enduring problems of poverty, race and class that have escaped their attention (Alter, 2005:42).

In academia, however, race and class have become two of the largest, and arguably two of the most important, categories of analysis used by every discipline in the social sciences and humanities. As a part of the so-called "triplet" of race, class, and gender, these categories are seen as attributes of individual and group identity as well as concepts that are central to modernity, with its unequal access to power. This linkage of racial and class-based classifications with the modern world, however, is not meant to imply that inequality did not occur in premodern times (Gosden, 2006; Orser, 2004:5), but that the structure and content of the modern ideas of race and class are qualitatively different and inextricably tied to Western capitalist ideology (Geremek, 1997:109; Hartigan, 2005:33–42; Smedley, 1999:18–20).

From the nineteenth century to the present, scholars have been arguing the relative importance of these analytical registers. Some researchers have claimed a privileged position for race by pointing out that class barriers can be transcended while racial barriers cannot (e.g., Smedley, 1999:221), and recently anthropologists such as Faye Harrison (1998) and Kamala Visweswarn (1998) have asserted that race and racism needs to be the central focus of our discipline. Many other researchers, largely working within the Marxist tradition, have argued that race falsely divides the working class or, even further, that white working-class subjectivity was predicated on racism (e.g., Roediger, 1991:13). In contrast, a few scholars have claimed that the old, modern ideas of "race" and "class" are no longer useful in a postmodern world (e.g., Gilroy, 2000; Pakulski and Waters, 1996).

Recently, however, even many Marxist theoreticians are beginning to explore the ways that the relationship between race and class has been undertheorized—refusing to reduce race to class and vice versa (Williams, 1995:301). At the same time there have been calls for anthropologists and archaeologists to begin to examine the intersections of several social phenomena, rather than fixating on the primacy of one (e.g., DiLeonardo, 1998:22; Franklin, 2001; see also Brandon, 2004a). This approach allows us to understand the subtle, yet important interplay between these phenomena. For instance, racial identities varied significantly over time, between

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classes, and across regions, but by the nineteenth century, *race* was a central feature of American *class* identity on both sides of the color line (Mullins, 1999a:22; Roediger, 1991).

Over the last decade, several scholars have argued that historical archaeology is in a unique position to shed light on the nature of these categories (e.g., Deetz, 1996; Jones, 1997:27; McGuire, 1982:161; Orser, 2001:1; Wurst and Fitts, 1999). In fact, it has been suggested that we may bear more *responsibility* for their investigation because of our focus on the modern world and our interest in voices that are unrepresented in the historical record (Orser, 2004:8).

Of course, attempting to synthesize archaeological approaches to class *or* race in a chapter-length treatment is a substantial undertaking—much less attempting an overview of our discipline's approaches to both class *and* race. Fortunately, several recent works have provided us with solid, detailed examinations of race (Orser, 1999, 2001, 2004) and class (Wurst, 2006; Wurst and Fitts, 1999) as historical archaeologists have employed these concepts. In light of these works, and the many others that have taken race and/or class as their subject matter, I intend to provide a discussion of how these two analytical registers *relate to each other,* primarily focusing on work that has been conducted in North America. That is, I intend to appraise how historical archaeologists have attempted to parse race *and* class in their work and the implications of the methods that they have employed in their investigations.

Roots of Class and Racial Analysis in Historical Archaeology

The archaeologies of race and class have their beginnings at a similar point in time in North America—the late 1960s. It is not that archaeology had not previously been conducted on sites that were of interest due to the race or class of the occupants (e.g., Bullen and Bullen, 1945), but these categories were not the *analytical focus* of the archaeologists who were conducting the excavations. This changed in the 1960s, when "the civil rights movement, the war in Vietnam, and other factors combined to cause archaeologists, and most social scientists, to reevaluate the social relevance of their fields" (Orser, 1988a:10). These factors caused many archaeologists to become dissatisfied with the seemingly atheoretical products of pre-1960s archaeology and the newer approaches that "emphasized ecological factors and cultural adaptation at the expense of social dialectics and conflict" (Matthews et al., 2002:110).

Robert Ascher, Charles Fairbanks, and James Deetz (Ascher, 1974; Ascher and Fairbanks, 1971; Deetz, 1977; Fairbanks, 1974) provided some of the earliest examples of scholarship that approached sites with what Singleton (1999:1) has called a "moral mission: to tell the story of Americans—poor, powerless and 'inarticulate'—who had been forgotten in the written record."

Despite this newfound dedication to a more social archaeology, race and class have remained what Wurst (1999:7) has referred to as "ghost concepts" in the field of historical archaeology until relatively recently. Serious archaeological investigations into race only date to the 1990s, and class remains an underutilized analytical register—even by archaeologists focusing on capitalism and inequality (Orser, 2004:81; Wurst, 2006). Both concepts have often been subsumed under a host of topical archaeologies that, although fruitful in other ways, served to decenter these registers while focusing on broader phenomena—plantation archaeology, archaeologies of inequality, dominance and resistance, ideology, the archaeology of capitalism, and the archaeology of the African Diaspora.

Below we will briefly examine the history of the archaeological approaches to race and class. Although this discussion is presented chronologically, the reader should keep in mind that I am not proposing a progressive evolution of theoretical deployment (i.e., many early theoretical models are still used in some contexts by researchers today). Additionally, I must point out that my own work deals with the American South and the archaeology of African American life in the nineteenth and twentieth centuries. Thus, although I have attempted to broaden my discussions to include larger theoretical debates, I feel that a bias toward my own "comfort zone" is clearly evident.

A Note on Terminology: Race, Class, and Ethnicity

The late 1970s and early 1980s provide us with the earliest works in historical archaeology that specifically

use race, ethnicity, and class as analytical registers. One of the first major published works to address the intersection of race and class was *Archaeological Perspectives on Ethnicity in America: Afro-American and Asian American Culture History* (Schuyler, 1980). This volume consisted of 14 essays that provided a variety of historical treatments that focused discursively on ethnicity, although many essays reveal the complex relationship between race and class on African American and Asian American sites.

There is a considerable amount of confusion regarding terminology in analyses based on race, ethnicity, and class. In these pioneering works, "ethnicity" and related terms (such as ethnic group and ethnic identity) were often used as a suitable substitution for "race" (Singleton, 1999:2; Smedley, 1999:31). This substitution was not uncommon throughout the social sciences and is rooted in attempts to emphasize that race was a social construction as opposed to the earlier, widely held biological orientation of the term (Omi and Winant, 1994:14–15; Smedley, 1999:30–35).

Although the shift to ethnicity-based theory is admirable from an anti-essentialist standpoint, by the end of the twentieth century researchers became increasingly aware that "ethnicity" was problematic when dealing with racial minorities—the victims of *racism*. Ethnicity-based approaches not only stressed the fluidity and flexibility of identity, but also stressed assimilation or acculturation as a logical response to the dilemma of racism (Omi and Winant, 1994:17). In reality, however, racial classifications are *seemingly* rigid and permanent despite the fact that racial identities themselves show an extraordinary amount of historical variance (Smedley, 1999:33). Thus, racially defined minorities were categorically different from ethnically defined minorities in that they have little choice as to their racialization. Some researchers, however, continue to use ethnicity to describe racialized subjects, especially when they want to stress agency in relation to identity formation (e.g., Baumann, 2004; Fesler and Franklin, 1999; Wilkie, 2000). With a few notable exceptions (e.g., Otto, 1980), the term "race" was not widely deployed as an analytical construct by archaeologists until relatively recently.

There is a similar amount of confusion surrounding the meaning of class in archaeological studies. There have been two major approaches to defining class among archaeologists—class has been seen as an "objective entity, thing, or structural location" and as a social relationship (Wurst, 1999:7, 2006:191). Those stressing the objective notion of class have tended to see "classes as a descriptive attribute of individuals" or "the aggregate of individuals who share a particular descriptive quality." As we will see below, this notion of class has played an important role in archaeological studies that use artifacts as identity markers or that employ consumer-behavior models. The second notion of class, the relational view, focuses on issues of power, struggle, conflict, and contradictions in social relationships (Wurst, 2006:197; see also McGuire and Wurst, 2002). This view has played an important role among archaeologists focusing on inequality and capitalism.

Problems Isolating Class, Ethnicity, or Race in Archaeological Analysis

The first generation of archaeologists struggling with the topics of race and class had an extraordinarily difficult time in their attempts to separate these concepts. Drawing on the well-established traditions of prehistoric archaeology, historical archaeologists attempted to focus on how "status differences" might be reflected in archaeological remains and their patterns. John Solomon Otto's work at Cannon's Point Plantation (Otto, 1975, 1980, 1984) should be applauded as the first to attempt to engage race as an imposed, culturally constructed condition (see discussion in Orser, 1998:662) and as the first to introduce class into the archaeological study of racially defined minorities (Singleton, 1999:3). Otto's analysis has been critiqued for both its focus (Orser, 1988b) and its methods (Miller, 1991). Interestingly, although Otto's work was ahead of its time in the way it attempted to deal with race and class, it also foreshadowed the problems that were symptomatic of other works engaging the connections between these two analytical registers. Otto, like many other pioneers in the field of plantation archaeology (e.g., Baker, 1980; Geismar, 1980, 1982; also see discussion in Singleton and Souza, this volume) focused on patterns in ceramics and faunal assemblages in order to discern "status differences." Although he used the classic "caste model" in

describing the conditions of enslaved African Americans in the American South, his analysis divided assemblages into three groups: slave, overseer, and planter (see Orser [1988b:738] for a critique of the caste concept as used in plantation archaeology). This tripartite division demonstrated the difficulties in separating class from race, and the resulting conclusions revealed a gradational view of "living conditions" as seen through material culture. In effect, the planter class had the most material wealth, followed by the overseer and, finally, the slaves. Otto parsed these statuses into a "racial/legal status" that distinguished between members of the free, white caste (planters and overseers) and enslaved African Americans and a "social or occupational status" that emphasized class differences in a gradational way (i.e., planters with the most access to material wealth and slaves with the least). Otto, however, constantly struggled to understand which social dimension was being expressed by the material record (Otto, 1984:160–175). This struggle is also taken up by Lange and Handler (1985:16) who state that in their work on British Caribbean plantations that "relative social/economic status or rank can be defined archaeologically, but that at the present time legal or imposed status cannot." Furthermore, they conclude that the class (or at least economic status) is more discernable than race:

> the clear implication is that archaeological patterns resulting from slave behavior are not sufficiently well defined to be used independently [from economic status]. Excavations in such settings have indicated a confusion of patterns in which there is overlap between planter, white overseer, black slave overseers, free white, free black, and Amerindian archaeological patterns (Lange and Handler, 1985:16).

A similar, but more ambiguous result can be seen in Vernon Baker's reanalysis of cultural material excavated from the household of Lucy Foster, a freed black woman who lived in Andover, Massachusetts, during the mid-nineteenth century. Baker, like Lange and Handler, was forced to make conclusions about what was being reflected in the assemblage of poor blacks:

> Two features make Black Lucy's Garden distinctive: 1) the site was occupied by an Afro-American, and 2) this individual was poor. Similarly, Parting Ways was occupied by needy Blacks. The issue, then, is that the patterns visible in the archaeological record may be reflecting poverty and not the presence of Afro-Americans (Baker, 1980:35).

Baker's above mention of "Parting Ways" refers to the James Deetz's early work at the Parting Ways site, the home of a black Revolutionary War veteran and his kin in Plymouth, Massachusetts. Parting Ways was excavated the same year as Charles Fairbanks's work at Kingsley Plantation in Florida, but Deetz was taking a different theoretical approach to the past than Fairbanks, Otto, and others working within the "status differences" tradition. Although Deetz (1977:154) does counter the African American stereotype of "simple folk living in abject poverty," the thrust of his analyses of early colonial America focused on large-scale structural changes in American culture throughout the colonial period. The major structural differences for Deetz are temporal, thus he downplays internal divisions such as class. Although Deetz's (1977) influential *In Small Things Forgotten* addressed race directly (primarily through the Parting Ways site), his approach did not parse class differences in a clear way. Furthermore, his structural treatment of the Parting Ways site seemed completely separate and parallel to his analysis of "white" American culture—all white-related sites are interpreted through change (i.e., the shift from medieval to Georgian mindset), whereas the material record of Parting Ways is interpreted through continuity (i.e., Africanisms and creolized African American patterns). Thus, while Otto and Baker struggled to separate class from race in their material analysis, Deetz used the material culture at the Parting Ways site to construct a fundamentally different narrative.

Patterns, Consumer Choice, and Ethnic/Class Markers

Otto was, however, well aware that there was "an imperfect association between status and material rewards" (Otto, 1980:4, 159). This is not necessarily the case with many of the countless researchers that followed Otto's lead into the first "boom" in plantation archaeology (e.g., Adams and Boling, 1989; Adams and Smith, 1985; Armstrong, 1985; Joseph, 1989; Klingelhofer, 1987; Lewis, 1985; Orser, 1988a, 1988b; Orser and Nekola, 1985; Wheaton and Garrow, 1985).

Throughout the 1980s, historical archaeologists began to develop two major approaches to examining race and class. The first approach attempted to find and interpret ethnic or class markers and the second focused on identifying the boundaries between groups (Griggs, 1999:88; Wurst and Fitts, 1999:2). The "ethnic marker" studies often fixated on particular classes of material culture that may be considered diagnostic of particular classes or racialized subjects. Artifacts such as colonoware, blue beads, high percentages of pipes, shortened pipe stems, opium paraphernalia, patent medicine bottles, ginger jars, cowrie shells, and particular types of food remains were often used to indicate the race, ethnicity, or class of households and groups (Griggs, 1999:87). The second approach, influenced by both Stanley South's (1977) pattern analysis and Fedrick Barth's (1969) notion of boundary maintenance, followed Otto's methods and concentrated on comparing patterns between disparate classes (usually read as socioeconomic status) or racial groups (Wurst and Fitts, 1999:2). These comparative studies grew into methods that stressed patterns of material consumption—consumer-choice studies (e.g., Adams and Smith, 1985; papers in Spencer-Wood [1987a]). These studies focused on explaining "why goods of differing quality or price were selected for acquisition and archaeological deposition by different cultural subgroups in a market economy" (Spencer-Wood, 1987b:9).

Both of these approaches can be seen in the papers contributed to the seminal book *The Archaeology of Slavery and Plantation Life* (1985) edited by Theresa Singleton. In this early, influential work, many of the chapters (in particular the ones dealing with settlement patterns) seem to focus implicitly or explicitly on patterns relating to class or the more general term "status" (e.g., Adams and Smith, 1985; Lewis, 1985; Orser and Nekola, 1985). Alternatively, other papers deal nominally with racial or ethnic identity as they are primarily concerned with Africanisms and the process of acculturation (e.g., Jones, 1985; Wheaton and Garrow, 1985).

In the worst cases, concentrating on diagnostic markers objectified race and class and led many researchers to focus on either assimilation or cultural survival in an overly simplistic way. Although there may be a statistically significant correlation (Stine et al., 1996), not *every* African American household will yield blue beads and not *every* household yielding blue beads is African American. Likewise, pattern studies and later consumerism studies often reduced consumption to a series of market transactions, where only the cost of the goods was deemed socially important (Mullins, 1999a:18), thereby bolstering the importance of class over race (Orser, 1987:125). Both approaches tended to look at housing, food remains, and ceramics to "determine the former site inhabitants' access to material wealth and labor" and then, "in turn, determine the racial, ethnic and social status of former site inhabitants" (Otto, 1984:158).

Thankfully, the historical record often makes it unnecessary to establish the demography of a household using material culture—a fact not lost on early scholars (Lange and Handler, 1985:15; Otto, 1984:159). What later researchers would find is that the presence of these artifacts in *particular* racial or class *contexts* would provide an important starting point for a more nuanced investigation of identity and agency in the archaeological record (Perry and Paynter, 1999:301; see below for further discussion).

I believe that Orser (2004:17) has correctly correlated problems analyzing race (and, by extension, class) with problems inherent in the underlying definition of culture employed by these various researchers. Although entirely within the mainstream of the archaeology of the period, countless researchers—including Deetz with his structural approaches and Otto with his pattern analysis—used a reified, objectified notion of culture. Orser's critique of the employment of a reified concept of "race" is mirrored by LouAnn Wurst and Robert Fitts's discussion of class as an analytical register (Wurst, 2006; Wurst and Fitts, 1999). Class has been seen as an objective, descriptive attribute of individuals; a static, unchanging classification of reified persons and social roles (Wurst, 2006:191; Wurst and Fitts, 1999:2).

With this simplistic understanding of class and race, disparate peoples with disparate cultures could be identified by ethnic/racial/class markers or patterns, and their degrees of difference or assimilation could be tracked by changes in material culture and pattern recognition. However, the very notion of disparate cultural wholes obscured real differences, contradictions, and conflicts within and between racial and class subjectivities (Matthews et al., 2002:111).

Many historical archaeologists, however, were about to make a shift that would begin to address the contested, political, and nuanced nature of class and racial identities as well as the role archaeology plays in their interpretation.

A Multitude of Voices: Critical, Political, Mutualistic, Marxist, and Vindicationist Archaeologies of Race and Class

During the late 1980s and early 1990s there was a significant shift in how researchers were approaching race and class in the archaeological record. This shift can be linked with the growing, broader dissatisfaction with the processual approaches of the 1970s, which were accused of

> uncritical acceptance of positivism, stress on functionalism and environmental adaptation, disdain for emphasis on social relations or cognition or ideology, lack of concern for the present social production of knowledge, overemphasis on stability rather than conflict, reduction of social change to effects of external factors, and belief in quantification as the goal of archaeology (Shackel and Little, 1992:5).

Other factors, such as the political consequences following the "rediscovery" of the African Burial Ground in New York in 1991 (LaRoche and Blakey, 1997:85), contributed to feeling that archaeology needed to be more critically aware and politically engaged.

Like all postprocessual archaeologies, there was no one approach promulgated by historical archaeologists attempting to deal with issues of race and class. Various archaeologists attempted to provide a theoretical framework with which to understand the past. These included various critical archaeologies drawing on the works of the Frankfurt School (e.g., Leone, 1995; Leone et al., 1987; Little, 1994; Shackel and Little, 1992), archaeologies of mutualism derived from the work of Michael Carrithers (Orser, 1996), vindicationist archaeologies drawing on anti-essentialist works and critical race theory (e.g., Epperson, 2004; LaRoche and Blakey, 1997; Mack and Blakey, 2004; Perry, 1999), archaeologies drawing on practice theory and the work of Pierre Bourdieu (e.g., Stewart-Abernathy, 2004; Wilkie, 2000), and archaeologies drawing on a combination of a variety of these and other theories—including explicitly postmodern theorists (e.g., Hall, 2000).

Despite much disagreement, the hallmarks of most archaeologies of race and class that follow this shift are an emphasis on reflexivity, the use of some brand of critical theory, and the symbolic interpretation of landscapes or of individual pieces of material culture.

Power to the People: Reflexivity and Descendant Community Involvement

Although there are several important early articulations of the shift (i.e., Leone, 1984; Leone et al., 1987), this discussion on the intersection of race and class might best be served by beginning with a series of critiques of plantation archaeology. Particularly important are Jean Howson's (1990) and Parker Potter's (1991) critiques—papers which can be viewed as landmarks in the transformation in how archaeologist dealt with topics such as class and race.

By the late 1980s, archaeologists using the framework provided by pioneers such as John Solomon Otto had drifted toward an approach that decentered race in favor of legal and economic status. While Otto attempted to disentangle race and class in his analysis, researchers such as Adams and Boling (1989) claimed that although "clearly linked to race," nineteenth-century slavery in America was "much more arbitrary than commonly believed" and that status for the enslaved "was largely a legal condition, rather than one of race or skin color" (Adams and Boling, 1989:69). Potter took issue with the lack of political awareness of researchers working with racially charged materials and suggested that the focus on "quality of life," which was tacitly linked to class, was a "dangerous trap" (Potter, 1991:97). For instance, Adams and Boling state

> Indeed, on such plantations slaves may be better understood within the context of being peasants or serfs, regarding their economic status. Their legal status was still as chattel slave, of course, but their economic freedoms were much greater than most people realize (Adams and Boling, 1989:94).

Potter argued that Adams and Boling's lack of self-reflection significantly impeded their ability to understand the implications of their work and to anticipate the possible uses of their conclusions (Potter, 1991:94). Following this critique, and others

like it, archaeologists began to talk about race *and* class *and* their historical construction. Additionally, they became increasingly sensitive to the sociopolitical implications of their work—including grappling with ways to include descendant communities as true research partners (e.g., Epperson, 2004; Franklin, 1997:37, 2001; McCarthy, 1996; Patten, 1997; Perry, 1997).

The last decade or so has seen an increasing awareness that control of archaeological resources and knowledge *must* be shared with "descendant groups, other impacted communities and the public at large" (Franklin, 1997:39)—especially given the growing concern that we as archaeologists demonstrate what have been termed the "public benefits of archaeology" (e.g., Little, 2002). This is, of course, doubly true of archaeologies dealing with topics such as class and race, where researchers "must be informed by an awareness of long-standing debates about the politics of the past" among the groups with which they are working (LaRoche and Blakey, 1997:87).

Although the idea of a "descendant community" is often linked with race, recent archaeological research, such as the work done by the Ludlow Collective at the site of the Ludlow Massacre, has demonstrated that descendant communities can play an important role in class-centered archaeologies as well (Ludlow Collective, 2001; McGuire and Reckner, 2005).

Archaeological work at such sites as the New York African Burial Ground and the Ludlow Massacre site demonstrate how important descendant communities can be to our research. Along these lines, some researchers (e.g., Epperson, 2004) have warned that we need to carefully examine our relationships with descendant communities in order to avoid condescension, trivialization, vulgar anti-essentialism or, worse, co-opting descendant community authority by nominally "consulting" with groups without truly changing the power dynamic associated with knowledge production.

Looking at Material Culture at the Intersection of Class and Race

Aside from reflexivity and descendant community partnering, the 1990s also marked a shift in how archaeologists deal with material culture. Historical archaeologists, particularly those interested in issues such as race and class, began to stress "qualitative interpretation—rather than primarily quantitative explication, with meaning, with active symbolic uses of material culture" (Shackel and Little, 1992:5).

Many have moved toward understanding the mechanisms that frame how we see the past or the current political implications of our work, while others have looked toward their recovered material culture in a more symbolic way. Rather than using the material record as the point of origin for research questions (i.e., looking for ethnic markers or defining ethnic patterns in larger material collections), researchers began with households where the historical facts and conditions of racialization were relatively well understood. From that historical context, researchers then interrogated the material record for insightful contradictions and patterns that might shed light of the individuals' social identities.

Researchers as diverse as Paul Mullins, Adrian and Mary Praetzellis, and Laurie Wilkie have contributed interesting and powerful interpretations of individual classes—or even individual pieces—of material culture that speak to the intersections of race and class. These works take certain cues from the consumerism studies (and perhaps the ethnic marker search) that came before them, but they manage to synthesize the two previous approaches while at the same time framing the meaning of material culture and, in a broader sense, consumption in a way that avoids essentialism and recognizes the complex, nuanced meanings of things and identity. These works see artifacts as being constantly recontextualized by their use in different social situations. Meanings for things cannot be fixed as they are a part of "live information systems" (Praetzellis and Praetzellis, 2001:645). At the same time, these researchers see material culture and consumption as a way to imagine new social possibilities—to portray not only who we are, but also who we wish to be (Mullins, 1999a:29). Thus, they question the notion that everyone who used these pieces of "material culture employed these items to convey the same idea and for the same purposes" (Praetzellis and Praetzellis, 2001:647).

In this vein, Praetzellis and Praetzellis examine the manipulation of meanings behind the English ceramics in the home of Yee Ah Tye, a wealthy Chinese American merchant in California (Praetzellis and Praetzellis, 2001:648–649), Mullins looks at the powerful symbolic meaning behind "bric-a-brac"

and political paraphernalia in postbellum African American households in Maryland and California (Mullins, 1999a:19–39, 1999b, 2001), and Wilkie explores possible interpretations of items such as antiseptic bottles using confederate imagery found at black sharecropper households in Louisiana (Wilkie, 2000:176–180).

The key to this approach is an understanding of the broader social and historical contexts of everyday objects which can be used to help consumers "see themselves as, or opposed to, racial [or class] subjectivities" (Mullins, 1999a:18). These approaches, in this author's opinion, take giant leaps toward interpreting the complex web of identities entangled with issues such as race and class.

One potential area of improvement in this line of reasoning, however, is a problem of focusing on a few artifacts to the detriment of the whole assemblage. The act of concentrating on symbolically charged artifacts has yielded good results, but it might leave others wondering about the importance of the other 99 percent of the material recovered from excavations. This is not an entirely fair criticism, given the limitations of scholarly publication (I note, for example, that Praetzellis and Praetzellis include such material in their technical reports). To a certain extent, however, I feel that this is part of a remaining backlash against the hyper-quantification (and dehumanization) of the processual archaeologies of the 1970s. If this is the case, perhaps the pendulum has swung too widely. I believe it is entirely possible to do good archaeology using aggregated material culture as long as one is aware of the pitfalls that befell those who worked with patterns and Africanisms in the 1980s and 1990s.

An example of research that combines the nuanced, symbolic consumer interpretations with some degree of quantification to get at the intersections of class, ethnic/racial identity, and gender is Margaret Wood's examination of women, housework, and working-class activism at the site of the Ludlow Massacre and Berwind (Wood, 2002, 2004). In these, Wood examines the use of space and patterns in household refuse (i.e., degree of reliance on canned goods and ceramic evidence for coffee-related socializing) to assess women's roles in organizing across ethnic and racial lines.

Cultural Analysis: Expanding the Discourse on Race and Class

Although we have improved our ability to look at race and class in the material record, the intersections of the two phenomena can still remain elusive. Archaeological understandings of culture, poverty, and race are "necessarily complex and historically situated" (Orser, 2004:37) and in many of our works the categorical analyses of identity—race, class, and gender—compete as the key to social phenomena.

Recently, cultural anthropologist John Hartigan examined the "enduring contentious debates over the relative priority" of these three critical registers of social identity and proposed a return to a broader cultural analysis as a possible answer. He asserts, quite correctly, that analysts who feature one of these registers often end up

> asserting the centrality or singular importance of, say, race over class, or gender over either race or class. A cultural perspective, in contrast, renders these registers simultaneously active and mutually informing, rather than disputing whether one is more fundamental than the others (Hartigan, 2005:9).

Statements like this are echoed in many strains of African American scholarship and literature. For instance, in Richard Wright's introduction to Drake and Cayton's seminal work *Black Metropolis* he states

> The political left often gyrates and squirms to make the Negro problem fit rigidly into a class-war frame of reference, when *the roots of that problem lie in American culture as a whole*; it tries to anchor the Negro problem to patriotism of global time and space, which robs the problem of its reality and urgency, of its concreteness and tragedy (Wright, 1945:xxix, emphasis added).

Thus, for Wright, the problem of racism does not lie in categories such as class and race, but in the very structures of American culture writ large. In reality, these categorical registers are "a series of interlocking codes by which patterns of inequality are maintained and reproduced in perceptions of similarity and difference" (Hartigan, 2005:9). If we really are to get at these interlocking patterns of inequality, we must hold more than one analytical register in focus at the same time. We must approach race and class from a holistic cultural perspective.

Culture: Problem or Solution?

I have stated earlier that I believe that Orser has correctly pointed toward the concept of culture as a root of our problems addressing the archaeologies of race and class. Orser points out that most "archaeologists concentrating on the archaeology of slavery during the earliest years of this disciplinary focus used Krober's whole-cultural concept, largely via South and Deetz, as a methodological framework" (Orser, 2004:18). This "whole-culture" consisted of patterned regularity with definite boundaries and was the basis of most of the archaeological approaches covered in the early portion of this chapter—pattern analysis (South, 1977) and the search for "Africanisms" or cultural survivals (Fairbanks, 1974). The unsatisfactory nature of this reified notion of culture is one part of what the 1990s postprocessual shift worked to change. This shift, however, increasingly led archaeologists away from culture and toward categorical analyses of identity and more thematic frames (i.e., plantation archaeology, the archaeology of capitalism, and the archaeology of inequality).

Similar reified and objectified notions of culture have also led a whole generation of cultural anthropologists away from the culture concept (e.g., Abu-Lughod, 1991; papers in Dirks [1998]). The problems connected to "culture," however, like the problems connected with "quantification" in archaeology, need not be absolute. I will have to concur with other researchers—both in cultural anthropology and archaeology—that taking a "cultural perspective" on race and class can afford researchers several advantages, provided that one avoids the problems of past formulations of the concept.

Among archeological researchers, Orser's (2004:20–21) solution is to look toward creolization (when not misconstrued as a blended whole-culture) in order to solve the problem. I, like Mullins and Paynter (2000), see a strong connection between creolization, ethnogenesis, and culture change, and I believe that Orser's description of creolization is simply how *all* culture works (see Gundaker [2000] for critique of simplified notions of creolization). Matthews, Leone, and Jordan (2002) also take us in this direction through their application of Marxist critique to cultural production. Rather than understanding culture as "an orderly and structured whole," they contend that it is "an amalgamation of discontinuous interests, often in conflict, forged and reproduced as an entity through struggle and domination" (Matthews et al., 2002:110). Thus, cultural analysis, when correctly conceived, can demonstrate how the constructions of race, class, and gender distinctions operate "according to place-specific dynamics that ground and facilitate the concurrent production and reproduction of multiple overlapping and mutually reinforcing identities" (Hartigan, 2005:258).

The Archaeologies of White Racial Identity and Privilege

Hartigan's call for cultural analysis, however, is embedded in his project examining "white trash" as a liminally white group that cannot be understood solely in terms of class or race (Hartigan, 1997, 1999, 2005). Hartigan's whiteness (and white-skinned privilege) is not monolithic, and thus raises the concern that examining whiteness will re-center the privileged narrative and further undermine the perspective of racialized minorities. As archaeologists begin to examine whiteness, I believe that we can take advantage of cultural analysis, while simultaneously keeping inequalities at the forefront.

Although the first call to archaeologically examine (poor) whiteness can be found in Baker's (1980:36) reanalysis of Lucy Foster's Garden, it was not until relatively recently that archaeologists have begun in earnest to examine whiteness as a racial identity (Epperson 1997, 1999; Orser, 1999:666; Wilkie, 2004:118). Archaeologists are now investigating the different ways that whiteness is culturally embedded and leveraged for privilege in rural Massachusetts (Paynter, 2001), the Arkansas Ozark Mountains (Brandon, 2004b; Brandon and Davidson, 2005), Ireland (Orser, 2004:196–246), and Virginia (Bell, 2005).

In Massachusetts and the Ozarks, researchers have examined how racialized cultural memories of entire regions erase the presence of people of color, while at the same time shoring up the notion

of white purity. In Ireland, Orser has examined conflict in the village of Ballykilcline and connected it to the larger struggle of the Irish to transform themselves into members of the privileged "white race," while Bell has examined the important connection between the creation of whiteness and the development of capitalist economic systems using colonial Chesapeake case studies. These studies should be applauded for following Faye Harrison's (1995:63, 1998) calls to expand the discourse on race from an anthropological viewpoint. On the other hand, we must always be vigilant when examining whiteness (and applying broader cultural analyses) as it could easily lead to decentering the dramatic inequalities highlighted by the categorical registers of race and class. For instance, some of my own work (Brandon, 2004b) examining the historical trope of the "Ozark Hillbilly" could be reinterpreted as deconstructing the idea of white-skin privilege by producing a case of a "white other"—a result I would have never intended.

Conclusion

Where does this look at the intersections of race and class in historical archaeology leave us? Early attempts looked at race and class in simple objective terms—searching for markers and patterns in the recovered material culture and reifying the very concepts whose history we are attempting to understand. Attempts to isolate race and/or class as *the* important analytical factor were problematic because these two registers are so closely linked. The search for patterns morphed into consumer studies (especially in the case of class) and, in some corners, race became subordinated to class as the explanatory variable.

Frustrations with this trend led to the creation of historical archaeologies of race and class that stressed (1) public outreach and descendant community partnering and (2) a more complex, symbolic version of artifact analysis. These more recent attempts have taken positive steps by looking at material culture in a more nuanced way—starting from known contexts and exploring interpretive possibilities. But these newer works also focus on small numbers of artifacts that may be charged with symbolic value. All too often we do not hear the voices of the other thousands of artifacts recovered from the sites.

I have proposed that an explicitly holistic cultural analysis may be a fruitful alternative to analyzing competing categorical registers (i.e., class and race). If applied in a nonreifying manner, a cultural analysis may reveal the complex linkages between different, but often simultaneously manifested, identities.

Following Hartigan (2005:284), however, I believe that cultural analysis is not an end in itself and that we must keep the dramatic structural inequalities at the forefront of our analysis. Likewise, the explicit examination of whiteness will be an important part of our tool kit as activist researchers, but it can be a dangerous tool—potentially presenting a fragmented whiteness that obscures privilege and access to power.

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Ethical Issues in Historical Archaeology

Mary C. Beaudry

Introduction

Archaeologist and philosopher of science Alison Wylie has observed that the very identity of archaeology as a discipline is closely linked to how its practitioners frame their concerns around ethical issues (Wylie, 1996). Prior to the late 1970s, most archaeologists developed a sense of ethically appropriate behavior on more or less an individual, ad hoc basis, relying upon whatever role models presented themselves during graduate training and upon subsequent personal experience in the office or in the field. This informal and highly idiosyncratic approach to professional ethics is not serviceable in the contemporary milieu in which archaeology is practiced, as Brian Fagan (1993) and others have noted. A series of developments since the 1970s reflect the growing sense among professional archaeologists, particularly those working in the United States and the United Kingdom, that they need some sort of structured approach to deal with the ethical issues they confront. These developments include the formation of the Society of Professional Archaeologists (SOPA) in 1976, which vested itself from the outset in ethics and performance standards among professional archaeologists working in the Americas (cf. Society of Professional Archaeologists, 1988); the formation of a similar professional organization in Britain, the Institute of Field Archaeologists (IFA), in 1982 (Institute of Field Archaeologists, 1994); the adoption of numerous governmental and agency guidelines and standards for archaeological projects; and initiatives among major archaeological organizations in the 1980s and 1990s that led to the revision of existing codes of conduct that had become inadequate for addressing contemporary dilemmas facing the archaeological community (e.g., Archaeological Institute of America, 1994; Lynott and Wylie, 1995a; Society for American Archaeology, 1995, 1996; Society for Historical Archaeology, 1992).

The most recent development arising out of the movement toward greater professionalism among archaeologists is still unfolding. The Register of Professional Archaeologists (Register, or RPA) was created by a joint task force of SOPA, the Archaeological Institute of America (AIA), the Society for American Archaeology (SAA), and the Society for Historical Archaeology (SHA) as a joint registry intended to provide an effective means of enforcing basic professional standards among practicing archaeologists in the United States (though there are now members from elsewhere as well). SOPA voted to transfer its responsibility, authority, and assets to the Register. The SHA, SAA, and AIA all voted to become sponsors of the Register, with the American Anthropological Association following shortly thereafter. Sponsoring organizations endorse the mission of the Register, encourage their qualified members to register, and provide annual financial support (see "About the Register of Professional Archaeologists" on the organization's web site at http://www.rpanet.org/displaycommon.cfm?an=1&subarticlenbr=1). The philosophy behind the Register is "that by registering, archaeologists publicly endorse and agree to be held accountable to a basic set of eligibility requirements, a code of ethical principles, and standards of professional performance" (ROPA Task Force, 1997:27). The basic

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rationale for the establishment of the Register is to enhance the image of archaeology as a profession as well as the professional credibility of individual archaeologists who, by registering, pledge their willingness to be held publicly accountable for failure to uphold the standards set by the Register (ROPA Task Force, 1997:32).

Despite all these developments, the majority of archaeologists, at least until very recently, have paid little attention to standards of practice and ethical concerns surrounding what archaeologists do. Some see this as sheer apathy, while others suggest that the attitude arises from a failure to educate archaeologists about professional responsibilities. This lack became especially obvious after the passage in the United States and the United Kingdom of heritage legislation requiring archaeological surveys and excavations in advance of construction projects created a new arena for archaeological employment in the private sector. Variously referred to as cultural resource management (CRM), consulting, contract, or even commercial archaeology, this client-driven form of archaeology is now the source of jobs for the vast majority of archaeologists. Because many saw the emergence of private-sector archaeology as resulting in the emergence of "two distinct traditions in field archaeology: one devoted to academic research and the other to the documentation of antiquities threatened by destruction" (Bradley, 2006:1), it has taken several decades for the training of archaeologists to accommodate what was seen as a nontraditional form of archaeological practice—archaeology as a business-oriented profession vs. a cloistered academic pursuit.

The chair of the SAA's Ethics in Archaeology Task Force noted that "while most graduate programs dedicate ample classroom time to archaeological method and theory, very few programs dedicate significant time to ethics and professional conduct" and went on to note that the majority of archaeologists are unaware of the ethical policies and codes adopted by the organizations to which they belong (Lynott, 1997:589). The SAA Task Force concluded that there was a great need for a formal mechanism for training archaeologists about ethical practices, although it should be noted that the Principles of Archaeological Ethics adopted by the SAA go no further than to call for training "in a manner consistent with ... contemporary standards of professional practice" without specific reference to training in archaeological ethics (Society for American Archaeology, 1996:452). The need for training in ethics is being met, in part, by courses that address ethical issues facing the profession, though such courses are still far less common than courses on CRM or public archaeology. More and more professions have initiated programs to educate practitioners about ethical conduct, and in our own field we realize that we must *require* consideration of ethical issues as part of the basic training of all professional archaeologists.

At Boston University, for example, the course "Archaeological Administration, Ethics, and the Law" has been taught in the Department of Archaeology as one of the core requirements for M.A. and Ph.D. degrees since 1980. Professor K. D. Vitelli for many years taught a seminar on archaeological ethics at Indiana University (Vitelli, 1996:9), and in 1998, she and her Anthropology colleagues developed a Ph.D. track, Archaeology in Social Context, "to train students to address the complex questions emerging in debates over archaeological resources among contemporary peoples" (Center for Archaeology in the Public Interest, 2007). As awareness of the need to train archaeologists to recognize their ethical obligations to the profession and to deal with situations that are ethically compromising has grown, more and more institutions have acknowledged that an archaeologist's training must engage issues of the real world as well as the fictive realm of "pure research." As a result, courses dealing with ethical issues have been incorporated into the curricula of many North American anthropology departments that have strong archaeological programs as well as schools or departments of Archaeology and Prehistory in the United Kingdom and elsewhere. In 2004, members of the Center for Archaeology in the Public Interest at Indiana University, in collaboration with the SAA, organized the first SAA Ethics Bowl, which has now become a popular fixture of the SAA's annual meetings. The case studies debated by teams entered into the Ethics Bowl are available on the SAA web site as a classroom resource (Society for American Archaeology, 2007), and the event itself keeps a spotlight trained upon ethical issues in archaeology.

The concern for academic training in archaeological ethics, as noted above, arises in large measure out of the concerns that private-sector archaeologists must address in pursuing their enterprise. The rise of private-sector archaeology follows upon various countries' passage of heritage legislation requiring archaeological survey and excavation in advance of development and construction. Nowadays, the vast majority of archaeologists are employed in such work. Because such work normally involves private archaeological firms bidding for projects by responding to requests for proposals, it is seen as potentially fraught with potential ethical conflicts, both because of the bid selection process and because of the need to be responsive to the interests of clients, interests that might be in conflict with what "standard" archaeological practice requires. Private-sector archaeology has forced archaeologists to develop standards of practice that follow business rather than academic models, and to face issues regarding employment security, benefits, and other labor-market issues. Organizations such as the IFA in the United Kingdom have placed such concerns on a par with attention to defining standards of practice and codes of ethical behavior for archaeologists (see, e.g., Aitchison and Edwards, 2003). These developments have forced all archaeologists to be more alert to ethical issues. Historical archaeology is no exception, because it owes much of its phenomenal growth in the past two decades to the same forces that have resulted in the rise of private-sector archaeology.

Ethical Considerations for Archaeology as a Profession

Ethics is a branch of philosophy dealing with "morality, moral problems, and moral judgments" (Frankena, 1973:4). It is about good and bad, right and wrong behavior. Professional ethics embody the shared ideals, values, and guidelines for right conduct of members of a particular profession (Goldman, 1992:1018–1020). By joining a professional archaeological organization, an individual agrees, either tacitly or explicitly, to engage in professional behavior in accordance with that organization's published code of ethics. It is a good idea to familiarize oneself with the ethical standards of the particular organizations to which one belongs, but there are basic ethical issues of concern to all archaeologists, marine or terrestrial, regardless of area or temporal specialty.

There are two broad areas for consideration: first, responsibilities to the profession; second, responsibilities beyond the archaeological profession to the public interest, including the resource base as well as special interests like affected groups. Ricardo Elia notes that "archaeological ethics begin with the basic fact that archaeological sites and objects . . . are the fragile, finite, and non-renewable material vestiges of the human past" (Elia, 1998:327). Out of this awareness spring the core values of the archaeological profession: contributing to knowledge about the past; acting as stewards of the archaeological record; and serving the public interest (Elia, 1998). Stewardship has emerged as a key principle in contemporary archaeology (Lynott and Wylie, 1995b); it encompasses the archaeologist's responsibility to conserve the archaeological resource base through responsible approaches to its recovery and preservation, either in situ or as reconstituted through records and collections. Standards of research performance established by SOPA, IFA, the SAA, and other groups represent attempts to ensure that all archaeologists employ techniques aimed at maximizing information retrieval while minimizing impact to the resource base. The aim of professional organizations in developing statements of ethical principles has been to establish guidelines, not to enforce standardization. There is, however, increasing uneasiness on the part of many archaeologists that while ethical guidelines are of value, they constitute a form of institutionalization of ethics within the profession and fail to constitute ethical practice in various "forms of open-ended negotiation between expert practitioners and their diverse audiences" (Meskell and Pels, 2005a:1). We see an increasing concern on the part of archaeologists worldwide in developing practical ethical engagement in everyday archaeological practice (Meskell and Pels, 2005b), as well as in exploring the philosophical underpinnings of ethics in archaeology (e.g., Scarre and Scarre, 2006). In keeping with the impetus toward moving archaeologists' engagement with ethics beyond guidelines formulated from within scientifically

oriented professional organizations, the World Archaeological Congress has recently established a committee to begin "a process of identifying a general framework for thinking through the often complex ethics issues that face archaeologists, heritage practitioners, and those affected by decisions of these fields" (World Archaeological Congress, 2007).

Scholarship and Publishing

To share knowledge gleaned through archaeology with colleagues and with the public involves the dissemination of information through a variety of scholarly and popular media. There are, of course, widely accepted standards of practice in the area of publishing, some falling within the realm of copyright law. Archaeology, however, comes with its own set of difficulties generated by the fact that there is so much information that remains unpublished or underpublished (Fagan, 1995; Beaudry, 1984), and, more often than not, no way to confirm the veracity of data presented. We therefore have several ethical obligations with regard to publishing.

One is to give credit where credit is due, through co-authorship when a work is a collaborative effort, appropriate citations to colleagues' work, or simply by acknowledging assistance received from others. Citation of appropriate literature, whether it is in published or unpublished form or a personal or electronic communication, is absolutely critical, and follows from our obligation to keep abreast of the literature in our field. Studies of citation practices have revealed that it is not uncommon for authors to employ selective citation to express personal prejudice or in furtherance of the politics of inclusion and exclusion (Beaudry, 1994a, 1994b; Gero, 1993; Hutson, 2002). The fact that selective citation constitutes bad scholarship and is easily mistaken for a demonstration of an author's ignorance should be enough of a stigma to discourage anyone from falling into patterns of unethical behavior in this regard.

A related issue is the obligation to be fair in our assessment of the work of others, especially manuscripts and other materials that we may be asked to review. Honesty is always the best policy, and it is sometimes impossible to comment positively about a work. Tempering negativity with constructive criticism is always advisable and far more helpful than outright dismissal. Further, we are obliged to acknowledge conflicts of interest—which can exist in instances of dislike or antagonism as readily as it can result from a close personal or working relationship—and to decline to review in such cases.

Respect for the Dead, Concern for the Living

Serving the public interest goes well beyond making public the results of archaeological activities. It also involves education and sharing expertise in the development of policy and legislation (Elia, 1998) and, most important, attention to the concerns and sensitivities of others whose present lives are affected by the recovery of information about the past (Pyburn and Wilk, 1995).

Ethical issues pertaining to the treatment of human remains exemplify this point. If historical archaeologists felt themselves relatively untouched by the challenges to priority of access to human remains manifested in the Native American Graves Protection and Repatriation Act (Public Law 101–601, November 16, 1990, 25 U.S.C. para 3001 et. seq.; for a discussion, see Tabah [1993]), they had a rude awakening in the widely publicized protests over what the African American community of New York City perceived as the heedless and heartless removal of hundreds of interments from what became known as the African Burial Ground (Harrington, 1993). Emotionally charged protests forced a temporary halt to the project while the neglected concerns of the present-day African American population of New York were aired. Much of the anger felt by the protesters focused on the perception that removal of the remains of enslaved Africans by teams of white archaeologists was just one further attempt by the white majority to deny the existence of slavery in colonial New York and the important role African bondsmen and women played in building the city and in creating vast fortunes in which they did not share. The global notoriety of the Manhattan African Burial

Ground project[1] should have served as a lesson to all historical archaeologists that they should never undertake such a project with only the terms of a contract and compliance with the local review processes in mind; like our colleagues working in prehistoric context before us, we should have absorbed the lesson that we must share access to and control over the past (Zimmerman, 1994).

Yet in 2003, on Prestwich Street in Cape Town, South Africa, an upsettingly similar scenario played itself out when the exhumation of an early colonial burial ground prior to waterfront development resulted in bitter conflict between a vocal coalition of community activists, spiritual leaders, and First Nations representatives on the one hand and archaeologists, human biologists, and heritage managers on the other (Lawrence and Shepherd, 2006:80–85). Despite the outcry against their work, "archaeologists generally defended the exhumations on the grounds of the priority of science and the potential of archaeology as a route to recovering hidden histories" (Shepherd, 2006:5; see also Shepherd, 2007). Nick Shepherd (2006:5) notes that

> Prestwich Street has been the most contested instance of archaeological work in South Africa since the political transition of 1994. It has also been damaging to the discipline of archaeology locally, insofar as archaeologists were perceived to be disengaged from contemporary social and political concerns and unaccountable to a broader public. The lessons of Prestwich Street are clear: ... there can be no alternative to an informed and thoughtful engagement with the currents of contemporary life and with what might be termed the "necessary entanglements" of life in the postcolony.

We can only hope that the "lessons of Prestwich Street" are learned better than the lessons of the Manhattan African Burial Ground. The major lesson to take away from both archaeological fiascos is that archaeologists' ethical obligations are not just to the "resource base" that serves as a source of work and hence of income for many archaeologists (see more below). We also have a strong obligation to a variety of stakeholders, such as the protestors in each of these cases who felt that the burying grounds should be preserved as memorials and sites of conscience. In both cases, archaeologists mistakenly assumed that their chief obligations were to the profession, in terms of scientific practice, and to the client, in terms of clearing the development site of human remains so that development could proceed.

It goes without saying that our sensitivity toward stakeholders in the past cannot be limited to grave sites alone, but to all aspects of the material record that speak to the conditions of life for groups whose descendants are affected by the results of the work that we do (see Patterson, 1995:129–144). Even before the controversy over the African Burial Ground in Manhattan, historical archaeologists began to examine the conduct and outcomes of excavations at African American sites. Jean Howson (1990) leveled an informed, substantive, and well-reasoned critique of the basic assumptions behind the archaeology of plantation slavery, noting many shortcomings in analytical approaches. She focused on theoretical underpinnings of the work, calling for a reformulation of the culture concept and a more thorough grounding in the historical contexts of slavery and the development of slave culture. Selected examples from the body of literature that drew Howson's sophisticated critique prompted a different response from Parker B. Potter, Jr. (1991), who claimed that the results of plantation archaeology offered little to contemporary African Americans and thus were of little merit. In his opinion, conclusions drawn by plantation archaeologists could be used to support racist arguments; he recommended that plantation archaeologists undertake greater self-reflection, with the goal of making archaeology "good politics," focusing "directly on the structures of oppression" (Potter, 1991:101, 104). Paul Farnsworth (1993) saw Potter's observations as largely valid but misdirected; the notion that African Americans in general constitute the audience for plantation archaeology, Farnsworth believes, is incorrect. Rather, the chief audience for this and any other research in historical archaeology, Farnsworth claims, is the wider community of scholars. Plantation archaeology is of little use, in Farnsworth's opinion, because it does not

[1] It is relevant to note, because of what follows, that at the 4th World Archaeological Congress held in Cape Town, South Africa, in 1999, a day-long session devoted to the Manhattan African Burial Ground project was a major feature of the program.

contribute to plantation scholarship writ large. Larry McKee (1994) acknowledged archaeologists' continuing failure to communicate adequately with the black community as well as with the community of scholars, but saw archaeologists' first layer of responsibility as one to the profession—to do archaeology well and to do "what archaeology is supposed to do best, to present fresh information on the past" (McKee, 1994:6). This, he notes, is what all components of our audience—black, white, scholars, the public—expect of us, and "we need to avoid the idea that valid research questions and interpretations can be developed out of the contemporary agendas of groups on either side of the power line" (McKee, 1994:5).

On the face of it, this debate about archaeology and the African American past, which has found parallel expressions in South Africa and elsewhere (e.g., the Caribbean), seems to arise out of differing theoretical perspectives about how to do archaeology and how to interpret and present the results of archaeological research; fewer and fewer historical archaeologists subscribe to the notion that their work can or should be utterly divorced from politics and contemporary public concerns (see, e.g., Franklin and McKee, 2004; McDavid and Babson, 1997). We must be mindful that method is practice informed by theory, and encapsulated within the debates over African American and African Diaspora archaeology are key issues of identity and self-definition for historical archaeologists (Singleton, 2006). Practitioners in the field are concerned with ethical practice—right conduct—and in this instance disagreement arises over exactly where ethical responsibilities lie. All participants in the debate recognize that there are multiple constituencies for archaeology and that some stakeholders may have a greater claim than others; they disagree, however, as to which group of stakeholders has the right to make that claim. The very fact that historical archaeologists have begun to engage in an open exchange of ideas about how our work affects the people whose heritages we study is a healthy sign and makes one optimistic that our future work will be characterized by greater awareness of its potential outcomes.

Ethics in Historical Archaeology

Persons wishing to present papers at the annual meetings of the SHA are made forcefully aware of a heightened sensitivity to ethical issues on the part of that organization when they are required to indicate their endorsement of the ethical positions set out in the SHA constitution and by-laws by signing a statement to that effect as part of the abstract submission process. The SHA's firm and highly visible stance regarding its ethical policies arose from the unfortunate circumstance that, from time to time, commercially driven shipwreck treasure hunters had sought to gain legitimacy by presenting papers at the society's annual conference on historical and underwater archaeology. Historical archaeology has close links with maritime archaeology that make it critical for both underwater and land-based researchers to confront the special ethical problems involved in the investigation and preservation of underwater sites of all time periods. But do we as historical archaeologists face any ethical considerations unique to our field, ones we do not share with prehistorians or with Old World archaeologists who study the state-level, complex, literate societies of antiquity (e.g., the Near and Far East, Classical civilizations, etc.)?

Research Practice

As it developed and grew, historical archaeology suffered through several decades of identity crisis that affected how historical archaeologists defined their research activities. The basic issues in contention were whether the field was a branch of history, anthropology, of perhaps something else (for a useful recent discussion, see De Cunzo [1996]). For many, lodging historical archaeology within anthropology meant turning one's back on history and approaching historical sites with methods developed in prehistoric archaeology; for others who defined the field as primarily historical in nature, analytical procedures aimed at investigating and understanding archaeological sites as complex matrices were deemed irrelevant. Both approaches privileged one sort of evidence over another—excavated data in the former case, documents in the latter.

Gradually, however, a consensus has been building that historical archaeology is a fully interdisciplinary (or perhaps even better, *transdisciplinary*), synergistic field that employs multiple, converging lines of evidence and that stresses context in all its guises—cultural, historical, environmental, *and* archaeological (see, e.g., Beaudry, 1995, 1996; De Cunzo, 1995, 1996; Mrozowski, 1996; Orser and Fagan, 1995; Worrell et al., 1996). This has implications for evaluating what constitutes right conduct in the practice of historical archaeology and to the training individuals must receive if they are to conduct historical archaeology in a professionally responsible and acceptable manner. There are numerous examples of persons trained as prehistorians or poorly trained as historical archaeologists undertaking projects without being aware of the range of sources available or of how to make use of them, and without even the most basic comprehension of the historical context(s) of or literature pertinent to the sites under study. The result is substandard work that often treats historical sites as if they were prehistoric and that wastes financial and cultural resources. Jean Wilson's study of the social, intellectual, and material world of William Shakespeare offers a poignant case study of how lack of a thorough grounding in the relevant literature led London archaeologists to misinterpret the remains of the Globe Theatre when they first uncovered it (Wilson, 1995:165); in this example historians and archaeologists were largely ignorant of each other's knowledge and concerns. Wilson (1995:166) notes that "the problem is not as simple as lack of cooperation"; rather, both sides failed to profit as fully as they should have from the work at both the Rose and the Globe because of their ignorance of the other's discipline. Apart from the obvious lesson for archaeologists that they need to redouble their efforts to inform the public and other scholars about archaeological methods and interpretation, it is clear that historical archaeologists need specialized training that goes well beyond methods and techniques of excavation.

Hence the need for specialized training for historical archaeologists is an ethical issue equally as important as other, more obvious, ethical concerns addressed in this chapter; it may also be the only ethical issue unique to historical archaeology—though clearly, all specialists must undertake training requisite for their chosen specialty. The point is that historical archaeology is a specialty in and of itself, requiring special training. It is not something anyone who stumbles over a historical site in a resource survey can master as a "quick study" or by consulting one or two books on historical archaeology and historical-period artifacts.

Discussions about the training of historical archaeologists have become increasingly frequent at SHA meetings and in the pages of the *SHA Newsletter;* by and large, participants in these discussions have outlined their concerns about proper training for historical archaeologists as a job-market or career development issue (see Gray, 1997). Teresita Majewski, then editor of the Teaching Historical Archaeology column in the *SHA Newsletter,* summarized the major points of a 1995 SHA conference session titled "Mending the Cracks: An Open Forum on Academic Standards" in an open letter to students and prospective students of historical archaeology. Here she stressed the need for training in the specific skills necessary for doing historical archaeology (Majewski, 1995:22–23):

> these include training in field and laboratory methods as well as how to conceive of, plan, implement, and complete a research project. Descriptive and analytical skills are essential. ... Essential to your training is the ability to conduct background research in relevant literature and primary documents and to evaluate the materials you have compiled. If you are interested in Spanish or French Colonial studies, learn the appropriate language or languages! In historical archaeology, the critical evaluation and analysis of both archaeological and documentary sources are essential.

If students must be trained properly to be good historical archaeologists, it follows that professional historical archaeologists, especially those in academia, need to develop programs that address all aspects of what the profession defines as essential qualifications for historical archaeologists. This includes training in professional ethics, resource protection advocacy, responsibility to the public, preservation laws and policies, and in workplace and management issues *in addition to* education in anthropological and archaeological theories and methods, history, historical research, and historiography, identification, analysis, and interpretation of material culture, and museology (Majewski, 1995:23).

To paraphrase Larry McKee, our primary ethical obligation to the profession and to the public is to do historical archaeology well (McKee, 1994:6). If we consider this as an extension of the general archaeological ethic that an archaeologist shall not "undertake any research that affects the archeological resource base for which she/he is not qualified" (SOPA, 1995:I.1.2d, in Vitelli [1996:254]), we must acknowledge, therefore, that historical archaeology is a distinctive field that requires specialized training different from the training that, for example, prehistorians or Classical archaeologists receive.

Oral History

One potential source of compelling and powerful data for historical archaeologists is the memories of living persons. Scholars from diverse fields—including other branches of archaeology—make use of oral history, but historical archaeologists are the only ones who can, realistically, make full use of oral histories in site interpretations. For this reason many historical archaeology projects employ oral history as just one of the many lines of evidence brought to bear upon uncovering and interpreting the past (Purser, 1992; Metheny, 2007; see Purser [1992] for a full discussion of the value of oral history in historical archaeology).

Oral historians have developed guidelines for designing and carrying out oral history projects and have given special attention to the ethical issues that pertain to this type of research (see, e.g., Allen and Montell, 1981; Hoopes, 1979; Yow, 1994). The first concern is respect for informants and interviewees. This is accomplished through careful advance planning before undertaking interviews and by sensitivity and neutrality during the interview process. Most oral historians feel it is appropriate not just to thank their informants for their willingness to be interviewed but also to allow them to review and correct transcripts of the interview(s), as well as to follow up by sharing copies of the products of the research.

Collection of oral histories as part of an archaeological project calls for the same attention to preservation and curation that is given to artifacts, notes, and site records of all kinds, in whatever media. In other words, the oral historian should take care to preserve copies of tapes and transcripts of interviews and to deposit them in an appropriate archive for long-term curation, where other scholars can gain access to them. Yow's useful manual, *Recording Oral History*, reproduces the Principles and Standards of the Oral History Association (Yow, 1994:252–264) along with a great deal of other useful information (including annotated bibliographies) for anyone seeking to undertake an oral history project.

Collaboration with Commercial Enterprises

An area of great concern to contemporary archaeologists falls under the rubric of the ethics of collaboration (Elia, 1992). It is a simple matter to deplore commercialization of the archaeological record through treasure hunting and looting and the sale of artifacts, and no one who has legitimate standing as a professional archaeologist would engage in such practices (Elia, 1997). But occasions do arise that constitute genuine ethical dilemmas for well-meaning archaeologists, who, in complying with the law, find themselves on the outside of what the profession deems right conduct. The majority of such cases have involved historical archaeologists hired to work with commercial treasure hunters.

The Abandoned Shipwreck Act of 1987 states in Section 5, as one goal, to "foster a partnership among sport divers, fishermen, archeologists, salvors, and other interests." It is important to understand, however, that in certain cases, while an action may be perfectly *legal*, it may not be *ethical*. For example, a law mandating that a qualified archaeologist undertake the oversight of a treasure-salvage operation can be held up to justify both the participation of the archaeologist and the conduct of the treasure-hunting venture in the first place. It is legal, after all. Here the logic, if such it may be called, is that an action cannot be unethical if it is not illegal, and, by extension, that any action for which a person could not be arrested constitutes right conduct (for a fuller discussion see Murphy et al. [1995]). Elia observes that "in recent years a consensus has emerged that professional archaeologists must eschew collaboration with treasure hunters;

collaborators risk professional censure" (Elia, 1998:327). This is because such actions run contrary to the basic principle of stewardship.

Commercial vs. Academic Archaeology: Two Cultures?

I noted earlier that for several decades commercial or private-sector archaeology was deemed as something set apart from "mainstream" academic research; this has been a matter of concern in both the United States and the United Kingdom. Richard Bradley (2006:1) has observed that academic and commercial archaeology of prehistoric sites in Britain are "undertaken by different people, funded by different sponsors and their results are disseminated in different ways," adding that the contrast between the two is so striking that "it is tempting to describe them as two cultures."

Bradley's (2006:11) essay begins in a "state of dejection" over the fact that the work done by commercial archaeologists, while expanding the database of knowledge on prehistoric Britain exponentially, fails to contribute to the overall aims of academic archaeology because, rather than publishing results in books and journal articles, commercial archaeologists produce limited-run technical reports that are intractable resources for academic prehistorians seeking to illuminate broad patterns or to develop some sort of national synthesis. Archaeologists in the United States have expressed a similar sentiment regarding the inaccessibility of reports and the data they contain, though there has not yet been a call for any sort of national synthesis; rather, emphasis has been upon the public benefits of archaeology funded by developers and taxpayers (Little, 2002) alongside expressions of a continuing frustration on the part of archaeologists that their work is not taken seriously by historians (e.g., Lees and King, 2007; Little, 2007; Noble, 2007; Purser, 2007; cf. Courtney, 2007; see also Brumfiel [2003], who expresses concern that *anthropologists* pay inadequate attention to the work of historical archaeologists). The "divide" between academic and consulting archaeology, according to Iain Stuart (2007:46), has left Australasian historical archaeology in a constant state of turmoil over self-definition, best practice, and opportunities for publication (Stuart, 2007:50). Despite this, "large and small consulting projects ... generate employment and substantial publications" and a number of major projects in Australia and New Zealand are conducted as collaborations "between the academic and consulting arms of the profession" (Lawrence and Karskens, 2003).

While in the United States it is possible to distinguish between commercial and academic archaeology, there is considerable crossover in terms of personnel and exchange of data and ideas, and all but the most ivory-tower-ensconced historical archaeologists have come to realize that regardless of whether they are employed by a private contracting firm, a state or federal agency, or a college or university, the preponderance of work they do is client-driven or answerable to a variety of stakeholders in the past. In the United States, there are few sources of funding for "research" archaeology, hence the bulk of U.S. historical archaeology is done not by academic archaeologists but by contract archaeologists. As a result, "commercial" historical archaeology in the United States is as much a part of the mainstream as is academic archaeology, and "commercial" archaeologists maintain high standards of professionalism and best practice. Archaeologists who conduct major projects for private developers or for agencies such as the National Park Service regularly add to the "gray literature" of lengthy, limited-run technical reports, but they also, on their own initiative or with the support of their employers or sponsors, produce both academic and popular books on the results of their work in the "commercial" sector (e.g., Mrozowski, 2006; Mrozowski et al., 1996; Shackel and Winter, 1994; see also Karskens [1999] for an Australian example). They also disseminate the results of their work through peer-reviewed journal articles. Indeed, several thematic issues of the journal *Historical Archaeology* have been devoted to presenting not just technical but interpretive essays on major urban "commercial" archaeology projects such as those conducted in the Five Points neighborhood in New York City and in Boston in areas impacted by the depression of the Central Artery (Cheek, 1998; Yamin, 2001), on comprehensive CRM projects such as at Harpers Ferry, Virginia (Shackel and Winter, 1994), or on the results of multiple

contract archaeology or CRM projects at sites associated with workers in the sex trade (Seifert, 2005) and construction workers' camps in the American West (Van Bueren, 2002). There is increasing evidence in the United Kingdom that "commercial" archaeology is becoming a part of the mainstream of historical (or post-medieval) archaeology as practiced there (see, e.g., Symonds et al., 2006; Palmer, 2007). Thus the rise of "commercial" historical archaeology has resulted in important contributions to our knowledge base while raising awareness discipline-wide about ethical standards and professional practice.

Public–Private Partnerships

Here I provide a single, outstanding example of a partnership program between public agencies and private individuals. In England in 1997, archaeologists, with support from the Heritage Lottery Fund, the Museums, Libraries and Archives Council, and the Department for Culture, Media and Sport, initiated a program to encourage members of the public to voluntarily report finds of archaeological interest so that they could be fully recorded. The Portable Antiquities Scheme (PAS), which is linked with the 1996 Treasure Act, was at first a regional pilot program aimed at encouraging metal detector users to report their finds to local Finds Liaison Officers. The scheme proved so successful that it was extended to all of England and Wales in 2003. The PAS is administered by the British Museum, and the Finds Liaison Officers record the nature and location of finds, which are listed on the PAS web site (Portable Antiquities Scheme, 2007). Some archaeologists express dissatisfaction with the lack of contextual detail pertaining to finds recorded under the scheme, but for others, the burgeoning catalog of finds from many parts of England and Wales that have heretofore seen little in the way of archaeological survey or systematic excavation (rural areas, for example) is having a major impact on what is known about early occupations, especially with regard to Viking and Saxon settlement in northern England (Leahy, 2003; Leahy and Paterson, 2001). It is also allowing "a national picture of some elusive aspects of post-medieval material culture to be built up, filling significant gaps" (Egan, 2005:328). The PAS has been an overwhelming success in encouraging "right" behavior among non-archaeologists, and for archaeologists interested in regional distribution of finds it has proved highly beneficial. Of serious concern to professional archaeologists in some quarters, however, is the possibility that the PAS might serve to encourage the expansion of metal detecting and finds seeking as a pastime, to the detriment of the archaeological record.

Conclusion

Archaeological ethics, a set of principles expressing the shared values of the profession as a whole, are the vehicle through which we establish the *ideal* for right conduct. In essence, ethical standards provide a means of self-regulation, but at a more complex level, archaeological ethics provide a means of regulating practice and negotiating politics, of formulating how we as archaeologists deal with *others*—the people whom we study, their descendants, and all who are affected by the outcomes of our work. Lynne Meskell (2002:293) makes the point that "at the nexus of identity and politics lies the crucial terrain of ethics," noting that we must abandon "the illusion that the subjects of our research are dead and buried, literally, and that our 'scientific' research goals are paramount"—archaeological ethics are not just about us as archaeologists but are also about how we behave as professionals and how we relate people who are not archaeologists. Because they express the values at the core of the discipline, ethical standards constitute the basis for awareness about professionally appropriate behavior as well as the foundation of professional identity.

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Colonies, Colonialism, and Cultural Entanglement: The Archaeology of Postcolumbian Intercultural Relations

Kurt A. Jordan

Introduction

The current epoch of "globalization," in which European-American political and economic forms are exported and used to dominate other areas of the world, is not a new phenomenon. Forcible expansion of an intercontinental system based on nation-states and nascent capitalism began in 1415, when Portugal seized the North African port of Ceuta (Wolf, 1982:129). Other European nations followed on the heels of the Portuguese, eventually generating near-global exploration and settlement, with the conquest and exploitation of indigenous peoples following in its wake. This chapter provides a framework for the archaeological study of the intercultural relations caused by post-1415 European colonialism.

Focus on post-1415 European expansion fits the definition of "historical archaeology" advocated by many scholars, particularly those based in North America (e.g., Deetz, 1991; Orser, 1996). However, this temporal focus does not encompass all possible examples of colonialism, nor all examples of colonialism where analysis of material remains can be aided by directly associated texts (Little, 1992). Although I draw on aspects of the theoretical and empirical investigations of pre-modern colonies, the scope of this essay is limited to the post-1415 era for purposes of brevity. Geographically, I rely on the North American examples with which I am most familiar; I also largely have confined my remarks to discussion of interactions between Europeans and indigenous peoples, as targeted discussions of slavery and the African Diaspora (though crucial elements in colonial strategies) are available elsewhere.

Those writing about the European expansion encounter many terminological dilemmas. Following the lead of other archaeologists (e.g., Rothschild, 2003; Thomas, 2000), I have tried to use more neutral terminology in the place of the "prehistoric" and "historic/historical" divide, which has been criticized frequently by both indigenous and mainstream scholars (e.g., Echo-Hawk, 2000; Lightfoot, 1995). The alternatives are not entirely unproblematic: one of the most-used options, "Precolumbian" and "Postcolumbian," equates the onset of the era of European expansion with Christopher Columbus's first voyage, despite the fact that this venture took place 77 years after Ceuta was seized. Nonetheless, I will use several terms interchangeably to refer to the period of European expansion and colonialism, including "Postcolumbian" and "modern."

Definitions: Colonies, Colonialism, Cultural Entanglement, and Structures of Discourse

Stein (2002, 2005a) makes a useful distinction between "colonization" and "colonialism." A colony is defined as "an implanted settlement established by one society in either uninhabited territory or the territory of another society" (Stein, 2002:30). *Colonization* is simply the process of establishing colonies, which produces a system of social interaction with at

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least three nodes: (1) the colonies themselves; (2) the indigenous groups impacted by the colonies; and (3) the colonial homeland or metropole (Stein, 2005a:25). Each node is altered by the process of colonization; social and cultural changes for the colonizers and their indigenous "hosts" frequently are dramatic. Determining whether colonies exist in a territory is a fairly straightforward empirical issue that should precede and be distinct from judgments about power relations.

In contrast, *colonialism* fundamentally involves relationships of intercultural domination. Reinhard (2001:2240) defines colonialism as "the control of one people by another, culturally different one, an unequal relationship which exploits differences of economic, political, and ideological development between the two." The colonizing group politically and economically incorporates the land, population, and resources of the colonized in order to maintain and manage the colony, and often exports resources or wealth to the metropolitan homeland. For subordinate groups, colonialism may involve genocide (the deliberate extermination of members of a group), ecocide (destruction of the ecosystem and resources that make a group's lifeways possible), and ethnocide (forced destruction of a cultural system without killing its members) (Bodley, 2000).

The important point raised by these definitions is that colonialism is only one possible outcome of colonization. Even a brief review of the archaeology and history of the Postcolumbian European expansion reveals significant variation in its mode and tempo in different regions. In some parts of the world, Europeans were interested in territory or agricultural crops, in others precious metals and minerals, and in still others "mobile goods" such as fur-bearing animals and slaves. In some areas, huge numbers of European colonists demographically swamped indigenous inhabitants, in others the European presence was limited to relatively small numbers of soldiers and administrators, and some European colonies failed completely. Either over time or by design, these situations did not equally involve "colonialism." Thus, investigation of the degree of colonial control expressed in particular contexts is a vital aspect of research on the Postcolumbian European expansion.

Many colonies were established in settings where the power of colonizers was more or less balanced with that of the area's prior occupants. Alexander (1998) has labeled this type of interaction *cultural entanglement*, defined as "a process whereby interaction with an expanding territorial state gradually results in change of indigenous patterns of production, exchange, and social relations" and as "a long-term, gradual, and non-directed process of interaction" (Alexander, 1998:485). In these situations, mutual influence is unavoidable—the parties involved are "entangled." But above all, power relations in entangled settings are ambiguous: it is difficult to tell who (if anyone) has the upper hand. While in some situations the rough equality of cultural entanglement rapidly evolved into a relationship of colonial domination, in others entangled relations continued for decades or even centuries.

The formal definition of cultural entanglement has a relatively low profile in the archaeological literature despite the fact that much of the archaeology of the European expansion has been done in situations that can be characterized as "entangled" (e.g., Bradley, 1987; Spector, 1993). These settings need to be identified as a distinct domain that is of vital importance to Postcolumbian archaeology. Archaeology can provide novel insights into entangled contexts because they are unlikely to be well-documented owing to the lack of colonial control and its accompanying archive (Cohn, 1996). Many oral traditions are unlikely to provide the temporally specific details of daily life during periods of cultural entanglement that archaeology can supply. Additionally, entangled settings remain undertheorized; for example, there has been little systematic investigation of the different types of intercultural power relations that characterized entangled settings, which in some cases differed dramatically from the familiar forms of domination that occurred under colonialism.

Separating colonialism from cultural entanglement reveals that certain concepts and theories apply better in one type of setting than in the other. For example, each class of interaction involves a distinctive structure of discourse. Under colonialism, political and economic relations between dominant and subordinate groups are characterized by demands and impositions, and decisions are made "top-down" without consulting the subaltern peoples fundamentally affected by those decisions. The

General Allotment, or Dawes, Act of 1887, which attempted to force private ownership of land on Indian Nations within the United States (Thomas, 2000:66–70), is a notorious example of top-down colonial discourse. Historian Richard White's (1991) conception of the "middle ground," where discourse between relatively equal groups is characterized by novel intercultural forms of communication and "creative misunderstandings," most frequently characterizes cultural entanglement (Malkin, 2002; cf. Gosden, 2004).

This consideration of discourse links the study of Postcolumbian intercultural interaction to the emerging body of "postcolonial" theory and its growing application in historical archaeology (e.g., Hall, 2000; Matthews, 2005). Postcolonialism typically is defined either in formal terms, as relating to the condition of newly independent former colonies (often involving new or "neo-colonial" forms of metropolitan manipulation and domination), or in activist political terms, as "the contestation of colonial domination and the legacies of colonialism" (Loomba, 2005:16). Any treatment of archaeology and colonialism must examine archaeology's potential to reproduce colonial relations between dominant and subaltern peoples in its present-day social practices, something that is done most often through the "top-down" structure of archaeological discourse. I return to this topic at the end of the essay.

Colonialism as a Research Framework in Postcolumbian Archaeology

In many parts of the world colonized by European powers, the early years of what has come to be called "historical archaeology" emphasized colonial installations and the dwellings of noteworthy historical figures (Orser, 2004). In North America, early large projects in historical archaeology focused on prominent colonies such as Jamestown (Cotter, 1958), forts like Michilimackinac (Stone, 1974), and missions, including La Purisima in California (Deetz, 1963). While there was widespread agreement that archaeologists studied colonial outposts and agents, colonialism did not emerge as a major focus of research until well after it did in cultural anthropology and political science (Asad, 1973; Fanon, 1966; Wolf, 1982). Historical archaeologists instead focused more tightly on material culture processes, such as acculturation, artifact patterning, the dynamics of borderlands, and the like (Lewis, 1984; Quimby and Spoehr, 1951; South, 1977). These studies placed surprisingly little emphasis on power relations among and within cultures. Despite early exhortations (e.g., Schuyler, 1970), detailed consideration of power relations did not gain significant traction in historical archaeology until the 1980s and subsequently has centered on intrasocietal dynamics of race, class, and gender (e.g., Delle et al., 2000; Leone and Potter, 1999; McGuire and Paynter, 1991).

Currently, archaeologists studying Postcolumbian colonialism are trying to emerge from the limitations of earlier theoretical models by developing new conceptions of intercultural relations. Archaeologists have engaged in a fruitful series of terminological and theoretical reassessments (e.g., Cusick, 1998; Gosden, 2004; Lightfoot, 1995; Lyons and Papadopoulos, 2002; Murray, 2004; Orser, 1996; Silliman, 2005; Stein, 2002, 2005b), and a growing body of broadscale comparative work also exists (e.g., Hall, 2000; Lightfoot, 2005; Rothschild, 2003). However, the recent literature has not completely bypassed some persistent stumbling points. William Roseberry (1988:174) cautioned anthropologists writing the history of European expansion to "avoid making capitalism too determinative … and avoid romanticizing the cultural freedom of anthropological subjects." Four limitations in the recent literature on the archaeology of Postcolumbian colonialism indicate Roseberry's warning has not fully been heeded: (1) persistent stereotypes of power relations; (2) structural emphasis on the metropolitan core; (3) homogenization of colonizer and colonized; and (4) valorization of indigenous cultural continuance.

First, the model of colonialism most often associated with European expansion is a stereotype derived from the nineteenth century that does not apply in many earlier settings (Gasco, 2005:72; Kelly, 2002:102). European colonialism changed significantly in the nineteenth century with the spread of industrial production and innovations in transportation and communication technology (Wolf, 1982). Incorporation into this new world

economy demanded risky regional specialization in single crops or raw materials, which in many cases went hand in hand with economic dependence (Wolf, 1982:310). Although some products of major importance in the early stages of European expansion (e.g., cotton, sugar, and gold) maintained their prominence, the new focus on mass production and bulk transportation of goods sets nineteenth- and twentieth-century colonialism apart from earlier eras.

Major theoretical models used to examine the modern world system, such as dependency theory (Frank, 1967) and world-systems theory (Wallerstein, 1974, 1980), often privilege the structural role of each party (e.g., as "core" or "periphery") within the colonial system. These models and applications derived from them emphasize the structurally determinative role of the metropole and provide a scanty toolkit for understanding indigenous resistance and autonomy. Such macrostructural perspectives run the risk of obscuring the contingent histories of individual colonies' development and also court the danger of interpreting the past from the perspective of its historical outcome. Due both to the synchronic leanings of structural models and because historical outcomes are known, many anthropologists and archaeologists indeed write about European colonialism as if it was inevitable, even when they are allegedly taking the perspective of those "on the periphery" or those "without history" (e.g., Hill, 1998:166; Spector, 1993:29; Wolf, 1982:86–87, 161, 306). Such treatments underplay or gloss situations of cultural entanglement, treating them as precursors to domination rather than as open-ended processes. As a discipline fundamentally concerned with long time spans, archaeology should study not only realized domination but also the processes by which it was established and resisted.

The interests of neither colonizer nor colonized are homogenous—colonizers may grow to have very different interests than residents of the metropole and among indigenous groups some people "choose to resist, proactively or reactively, the emerging colonial order; others will choose to collude with the colonizers in such a way as to assist in the development of the colony while creating a niche for themselves in the emerging power structure" (Delle, 1999:13). Detailed studies of particular historical contexts have revealed that "colonizing" populations frequently included large numbers of transplanted indigenous people as well as numerous multiethnic households (e.g., Deagan, 1983, 1996; Lightfoot et al., 1998; Voss, 2008a). Most indigenous groups were altered greatly by engagement with colonizers; warfare, migration, and epidemic disease (particularly in the western hemisphere) forced many groups to consolidate in order to maintain a viable political, economic, and demographic base (Galloway, 1995; Lynch, 1985), creating new cultural groups and cultural forms in the process.

Roseberry's "romanticizing the cultural freedom" of the subaltern is seen in the priority given to "traditional" forms of material culture, or what might be called "indigenisms" (Jordan, 2008:9–13). These "indigenisms" initially were used in the literature (e.g., Lindauer, 1997) to confound acculturation models that predicted near-total adoption of the cultural forms and goals of the dominant culture by subordinate populations. While "indigenisms" do represent a form of autonomy and control wherever they are found, archaeologists need to carefully examine the larger social relations in which they are embedded. The use of a Native-style bone hide-scraping tool in the industrial tanning vats of a California mission (Deetz, 1963:172) evidences only the slightest of controls over social relations. The archaeology of modern colonial engagements can no longer be content with the finding of "indigenisms"—after all, recent ethnographic research has shown that present-day indigenous institutions have retained their distinctiveness even in situations such as American Indian Christian churches (Dombrowski, 2001; Sturm, 2002). Nor should archaeologists remain uncritical of "indigenisms" in analysis: many seemingly "traditional" cultural forms actually derive from the era of European expansion, and evidence is accumulating to indicate that acceleration of intercultural differences in some instances aids in colonial domination (Dombrowski, 2004; Sider, 1997; Wilmsen and Denbo, 1990).

One way to begin to work around these limitations is to systematically address the structure of power relations, in particular spatial and temporal contexts. When one does so, it becomes evident that the European colonial expansion embodies almost as much variety in power relations as does the 5,000-year history of colonization starting with the Uruk era in Mesopotamia (Algaze, 1993; Stein, 2002).

Assessing Colonial Control (or the Lack Thereof)

While Stein (2002) has used the model of ancient trade diasporas to argue that there can be "colonies without colonialism," perhaps a better way to describe this situation is "colonialism of limited extent." Space itself is one of the main limits to colonialism, and the *radius of control* surrounding a colony is a primary variable to be investigated.

Scholars of empires (D'Altroy, 1992; Hassig, 1985) make a useful distinction between *hegemonic* and *territorial* strategies for imperial control that can be applied to the study of colonies. Hegemonic control is for the most part indirect, with obedience by subordinate groups created through threats of force and collusion. Hegemonic options are generally cheaper for imperial powers, in that a single standing army can be used to keep several subordinate populations in line, but it also gives subordinate groups a bit more flexibility in that many forms of resistance are not subject to immediate retaliation. In contrast, territorial control is based on the creation of outposts and infrastructure that directly control local populations. This type of control (typified by the later Roman and Inka empires) is economically expensive to create and maintain, but it provides opportunities for more direct surveillance and more immediate responses. Colonies typically consist of a core that is controlled *territorially*, even if it is a single building or quarter in a trade diaspora. This is the part of the colony that receives regular protection and surveillance, and can most confidently be labeled as being under the control of the colonizers. Archaeologically, territorially controlled areas can be recognized through the presence of distinctive architecture, military installations, and the like. Beyond the radius of territorial control, colonies typically assert *hegemonic* control over a greater area, within which they can stage retaliatory actions. Archaeologically, it may be possible to recognize hegemonically controlled areas through the presence of defensively oriented settlements, specialized production and storage facilities, etc.

Beyond this lie the hinterlands and frontiers of the colony, which of course remain the "core" from a Native perspective. Frontiers are indeed "zones of cross-cutting social networks" (Lightfoot and Martinez, 1995), although some zones contained more cross-cutting ties than others, as Rothschild's (2003) comparison of Dutch-Mohawk and Spanish-Pueblo social distance demonstrates. But frontiers are also zones of differential social control, and power relationships fundamentally constrain and enable the social networks that spring up there. Attention must be paid to the structural conditions that frame the relationships that take place within them.

This approach encourages the modeling of space and time in political-economic terms, resulting in a conception of a spatial mosaic of colonial control. Far from establishing region-wide colonialism, the radius of effective colonial control for some Postcolumbian European outposts likely extended little beyond the garrison's eyeshot. Networks of European control also left gaps and interstices where local populations could maintain relative autonomy, including the well-known maroon settlements, enclaves jointly established by escaped slaves and indigenous peoples across the western hemisphere (Agorsah, 1994; Sayers et al., 2007; Weik, 2004). Colonial control also oscillated over time, particularly in the event of successful rebellions like the Pueblo Revolt of 1680 (Preucel, 2002; Rothschild, 2003) and the "Caste War" in Yucatan, which began in 1847 (Alexander, 2004).

Determining how and why colonial powers were able to exert control (however limited) over Native populations is crucial. There are two main ways in which colonial powers come to dominate indigenous groups. The first is through *dependence*, where Europeans provided a set of goods or services so necessary that the indigenous group was willing to remake their economic and political goals along the lines desired by Europeans. The second is through *disruption*, where the actions of the colonizers made previous indigenous ways of life impossible.

Archaeological research has questioned earlier scholars' assumptions about Native dependence. For example, archaeology on sixteenth-century sites in northeastern North America indicates that the European goods in greatest demand were items of "spiritual significance" (such as glass beads) rather than utilitarian goods (Bradley, 1987; Hamell, 1992). These goods had preexisting analogues (in terms of color and composition) within Native cultures, and European goods (such as iron tools and copper alloy kettles) were extensively reworked so as to duplicate indigenous forms.

Additionally, many scholars (e.g., Starkey, 1998:20) have questioned the technological superiority of European weaponry, particularly at the early stages of the Postcolumbian expansion. European firearms were bulky, time-consuming to load, ineffective in wet weather, and required external connections for gunpowder, ammunition, spare parts, and repair. In contrast, Native weapons such as bows and arrows had significantly faster rates of fire and could be locally produced. In many cases, Native demand for European goods was surprisingly limited (White, 1991), and Native technologies frequently continued to be produced alongside European ones. Indigenous reliance on European goods was therefore neither instant nor total.

European traders used other indirect measures to enforce Native peoples to continue to produce for them. In many settings traders introduced alcohol, which is both addictive and (in large quantities) destructive to health, and/or manipulated credit to create enduring indebtedness, both of which bound particular producers to the endeavor (White, 1983, 1991). In situations where Europeans clearly had the military upper hand, officials extracted tribute from Native populations, including Russian demands for furs in Alaska (Crowell, 1997), Dutch demands for shell bead wampum in southern New England and coastal New York (Ceci, 1990), and demands for cash tax payments across Africa (Rodney, 1972). Europeans also pitted indigenous groups against each other and encouraged collusion among select segments of Native populations.

While these tricks of the trade in some instances were effective in forcing Native peoples to produce for the European market, perhaps a more fundamental logic of colonialism was to make previous ways of life impossible. Europeans "crowded out" Precolumbian lifeways by enforcing choices in seasonality and scheduling (*sensu* Flannery, 1968) that eliminated access to previous resources. In many instances Europeans demanded particular goods that were difficult to locate and easily depleted (such as beaver or sea otter pelts). Moreover, Europeans frequently specified in excruciating detail how such goods had to be processed. Native producers often had to reconfigure their patterns of movement and labor allocation to acquire and process the resources traded to Europeans, making preexisting ways of life impossible to sustain.

European colonizers also intentionally or inadvertently changed local ecological conditions in ways that dramatically affected indigenous populations. Historian William Cronon (1983) outlines how European settlement in New England fundamentally transformed the resources available to American Indian groups, particularly due to the field clearance required for intensive agriculture and stockraising. European settlements constrained Indian options for settlement relocation, farming, hunting, gathering, and fishing, but European fields also reduced crucial "edge area" habitats, reduced ecosystem diversity, and changed water drainage patterns. European livestock invaded and damaged Indian fields, forcing indigenous groups to fence in their crops (a time-consuming and unprecedented process) to protect them. European plant and animal pests also invaded indigenous ecosystems, at times to the detriment of resources needed by local peoples. Allen (1998:42–54) demonstrates the impact of European plant and animal species on the environment around the Spanish Mission at Santa Cruz in California by documenting massive increases in European-derived crop and weed species in archaeologically recovered pollen and botanical remains.

In addition to these fundamental ecological transformations, Europeans arrived with very well-developed institutions for demarcating and protecting property (Cronon, 1983). These practices included surveying, issuing titles, and protecting ownership through trespassing laws. With the exception of well-developed states encountered by Europeans such as those of the Inkas and Aztecs, indigenous peoples rarely had the ability to contest European acquisitions of property or the clout or expertise to oppose them within European-run courts. Institutions of property provided Europeans with a competitive advantage that they often exploited to the fullest.

After colonial domination had been established, much depended on the intentions of the colonial powers; witness the differences in outcome between the "mercantile" orientations of European groups involved in the fur trade and the "missionary" goals of Jesuit and Franciscan groups (Lightfoot, 2005; Rothschild, 2003). Where they can be enforced, the agendas of colonial powers have a fundamental, formative effect. Sider (1987:16) notes how Europeans only allowed American Indians in eastern North

America to become specialized dealers in limited or declining resources (such as beaver pelts, deerskins, military manpower, and land), whereas Europeans and their slaves took on the production of sustainable resources that Indians had used prior to Columbus, such as maize and tobacco.

Archaeological Illustrations

The archaeological cases that follow have been drawn from a vast universe of possible candidates in order to illustrate the points made in the preceding sections.

Cultural Entanglement: Seneca Iroquois, Hueda, and Dahomey

The conventional wisdom regarding Iroquois groups in the eighteenth century is that they had been "colonized" by the French, Dutch, and British. The Iroquois—after 1722, a confederacy of six American Indian Nations (the Senecas, Cayugas, Onondagas, Oneidas, Mohawks, and Tuscaroras)—were thought to have been dominated as a result of almost two centuries of involvement in the fur trade and alleged dependence on European trade goods, divisive political factionalism, demographic decline, and decay of matrilineal social institutions. However, for most of the eighteenth century, the European presence in Iroquois territory outside the Mohawk Valley was slight (Jordan, 2002, 2008, 2009). This was particularly true of the Seneca Iroquois, the westernmost group in the Iroquois Confederacy. Permanent European outposts (such as the French fort at Niagara and the British post at Oswego) were distant from Seneca villages, and there were never more than a handful of traders, diplomats, soldiers, smiths, and missionaries in Seneca territory at any given time. This situation persisted until well after the American Revolution, when the Six Nations ceded territory through treaties with the new United States and Euroamerican settlement expanded into Seneca lands. If accurate, the conventional model of "colonized" Iroquois people implies that European control over the Senecas must have been largely indirect.

Fieldwork conducted at the 1715–1754 Seneca Townley-Read site questions many of the assumptions of the "colonized Iroquois" model (this summary draws on Jordan, 2003, 2004, 2008, 2009). Excavation revealed that significant changes from local indigenous precedent had taken place at the site. Earlier Iroquois villages generally consisted of a cluster of longhouses, set in defensible terrain and frequently surrounded by a palisade. In contrast, the dwellings at Townley-Read were dispersed: built in a line, and set 60–80 m apart from one another. Many of the houses were likely to have been much smaller than previous Iroquois dwellings. Beaver pelts had been the focus of the Iroquois fur trade in the sixteenth and seventeenth centuries, but beaver bones represented only 3.1 percent of mammalian remains at Townley-Read. Additionally, materials made in Europe made up a very large percentage of material culture at the site. Analysts working within the "colonized Iroquois" framework have looked at similar data and asserted that community dispersal occurred because warfare with Europeans "had demonstrated the uselessness of traditional stockaded [Iroquois] villages" (Snow, 1989:298); that smaller houses represented the failure of matrilineal institutions to integrate larger groups and the adoption of European-style log cabins; that the declining proportion of beaver remains signified the poor position of the Six Nations in the fur trade; and that the large proportion of European goods represented "dependence."

However, I contend that most of these changes can be interpreted better in terms of opportunism than colonial constraint. The occupation span of the dispersed settlement at Townley-Read corresponds closely to a period of relative local peace in the region. Dispersed settlement provided Seneca women with easy access to croplands and water, significantly decreasing the daily demands of walking back and forth to fields and hauling water up the slopes of hilltop nucleated villages. The smaller houses used at Townley-Read were not "European-style log cabins," but in fact were "short longhouses," a traditional form that had made up a minority of the Iroquois housing stock for centuries. While direct production of beaver pelts likely did decline during Townley-Read's occupation, 79.7 percent of the mammalian faunal assemblage is made up of deer bones, a proportion not seen in

Iroquois territory since Precolumbian times. This suggests that Seneca hunters were commercially producing deerhides for trade with Europeans, a contention supported by trade statistics for the colony of New York (Cutcliffe, 1981). The copious presence of deer bone at Townley-Read suggests that Seneca men were hunting deer locally, a change from the long-distance hunting of beaver that had characterized the seventeenth century. Senecas, therefore, had ample resources to acquire the European goods found in the archaeological record, rather than being compelled to obtain them at the expense of meeting other material needs.

These changes took place in settings where other longstanding Seneca preferences continued to be expressed. For example, wild species make up 97.4 percent of the mammalian faunal assemblage (350 specimens identified to the genus or species level), and *no* European plant species were found among over 16,000 botanical specimens (Jordan, 2008:216, 279). There is no evidence for the use of plows, barns, draft animals, or fences that might signal the adoption of European-style systems of intensive farming and private property ownership. In combination, these opportunistic innovations and marked continuities suggest that the Seneca residents of the Townley-Read site maintained significant control over scheduling daily labor, allocating land, and providing for subsistence. The archaeological evidence therefore provides little support for the idea that the Senecas at Townley-Read were "colonized"; instead they were holding their own with European colonial powers and perhaps even thriving.

The archaeological work of Kenneth Kelly (1997, 2002) provides two additional examples of Postcolumbian cultural entanglement. Kelly (2002:96) describes how the African slave-trading kingdoms of Hueda (1660–1727) and Dahomey (1727–1894), located in present-day Bénin, were able to "regulate and manipulate" the European trading presence to a remarkable degree. Kelly's (1997, 2002) work centered on Savi, a city that functioned as Hueda's capital from its founding after Hueda achieved independence from the Allada kingdom in the mid-seventeenth century until its destruction by rivals from Dahomey in 1727. The site remained abandoned until excavation took place, making for excellent archaeological preservation. Kelly excavated both nonelite contexts and portions of a 6.5-ha palace compound, which was partially enclosed by a system of ditches.

Savi's location alone shows the degree of control exerted by Hueda over its trading relationships with Europeans. The site was separated from the ocean by 10 km of marshes and lagoons, making it relatively inaccessible to European military and naval forces (Kelly, 2002:105). Hueda's rulers stipulated that European trade enclaves be built within the royal compound at Savi, where they could be closely monitored. Similar to the Iroquois, Hueda was also able to "play" multiple European powers (including the English, Dutch, Portuguese, and French) against each other. Archaeological data from Savi indicate that most European goods were clustered in the palace compound, including European and Chinese ceramics, firearms, fine glassware, and alcohol bottles (Kelly, 1997:365). The only trade materials with wide distribution in both elite and nonelite contexts were glass beads and pipes used to smoke imported tobacco (Kelly, 1997:364). These data suggest that the rulers of Hueda maintained significant control not only over the relationships with European traders but also over their own populace.

Hueda's successor Dahomey used a slightly different strategy to control European trading centers by placing them in an "easily manageable cluster" in the capital at Ouidah (Kelly, 2002:109). Although the French, British, and Portuguese each were allowed to build a small fort, maintaining a small radius of control, these forts were located 3 km from the sea, and only 300 m from each other. Dahomey also installed a regulatory official called the Yoyogan to monitor European activity. The cultural boundaries Dahomey established proved to be durable. Prior to the late nineteenth century, Kelly finds little evidence for creolization of African and European forms at Ouidah; as one example, "there is nothing to suggest any innovation or other changes in Ouidah architecture . . . despite increased wealth, opportunities for 'Atlantic creole' populations to develop, and participation in the Atlantic trade" (Kelly, 2002:112).

The Seneca Iroquois, Hueda, and Dahomey examples each illustrate how Native autonomy was used to constrain European influence, preserve boundaries, and maintain continuities in vital cultural institutions. In each case, indigenous groups

appear to have been free of European territorial control (except on a very small scale) and acted largely outside the constraints of European hegemonic control as well. That these examples of long-term entanglement relied on overhunting populations of many fur-bearing mammals on a grand scale and warfare on distant American Indian groups (in the Iroquois case), and on the ongoing procurement of slaves from the interior (in the cases of Hueda and Dahomey) demonstrates that the limited autonomy of cultures "entangled" with Europeans cannot easily be valorized or "romanticized" in Roseberry's terms.

Limited Radius of Colonial Control: Fort Ross

In 1812, the Russian-American Company established a set of outposts known as the Ross Counter in what is now Northern California to generate sea otter pelts for trade to China. This Russian colony consisted of an administrative center at Fort Ross, a port, three outlying farms/ranches, and one island hunting camp (Lightfoot, 2005:5). The colony was established in the territories of indigenous Kashaya Pomo, Coast Miwok, and Southern Pomo Indians, and Russian colonists were accompanied by Native Alaskans (primarily Alutiiq men imported for their otter-hunting skills), Northwest Coast Indians, Native Siberians, Native Hawaiians, and creoles of mixed European-indigenous descent. Despite declining otter yields over time, the colony endured until 1841, when its assets were sold to entrepreneur Johann Sutter. Excavations at sites within and adjacent to the colony (especially at Fort Ross) have provided intriguing data on this complex, multiethnic settlement (my summary relies on Lightfoot [2005], Lightfoot et al. [1998], and Martinez [1997]).

The settlement plan at Fort Ross reflected the desire of Russian administrators to materialize a four-tier ethnic and social hierarchy at the site. At the top of the hierarchy were Russian administrators, who lived inside the stockade; next were creoles, who occupied middle-level positions in the colony's bureaucracy; third were Native Alaskans, who had their own neighborhood on the Pacific side of the stockade; and last were Native Californians, who lived in a separate neighborhood on the landward side of the fort. Extensive excavations in the Native Alaskan Neighborhood have revealed copious material traces of "interethnic households," primarily formed by unions between Native Alaskan men and Native Californian women (Lightfoot et al., 1998). These households followed what might be called a bicultural pattern: the layout and location of the neighborhood itself (all houses could see the ocean and the boat landing), architectural principles, and hunting technology reflected Alutiiq precedents, while the organization of house interior, cooking technology, food preparation techniques, and refuse-disposal practices followed Kashaya Pomo traditions. Thus the organization of daily life facilitated the maintenance of two separate cultural identities. Bicultural households in some early Spanish colonies, such as Puerto Real on the island of Hispanola (Deagan, 1996) and St. Augustine in present-day Florida (Deagan, 1983), also exhibit this gendered and somewhat public/private dichotomy (see also Voss, 2008b).

The Tomato Patch site, a Kashaya Pomo village about 5 km southeast of the Ross stockade excavated by Antoinette Martinez (Lightfoot, 2005:161; Martinez, 1997), provides an interesting perspective on the radius of control exerted by the Ross Colony. The village was inhabited both prior to and during the Russian occupation at Fort Ross, and although the dating of individual deposits remains problematic, there is a striking degree of continuity between deposits made previous to Russian arrival and those contemporary with the fort. First, the site continued to be occupied despite the very close proximity of a colonial military installation. Architectural features, including a large structure that may have been a sweat lodge, and village layout follow indigenous precedents. Foodways at the Tomato Patch site very closely match pre-Russian sites in terms of mollusk use and very few European domesticated animal remains were found at the site; the relatively low proportion of deer bones may reflect that the colonial presence limited hunting opportunities (Lightfoot, 2005:174; Martinez, 1997:150–151). The main forms of European material culture found at Tomato Patch were glass fragments and ceramic sherds. Some glass fragments were reworked into tools using indigenous methods previously used on obsidian; some ceramic sherds were "smoothed about the edges and drilled for possible ornamentation"

(Martinez, 1997:149). Martinez (1997:152) concludes that there is "strong evidence for continuity in traditional practices as well as village layout." The Tomato Patch site certainly was close enough to Fort Ross to be subject to occasional hegemonic pressures, but it seems safe to conclude that the village was outside the fort's effective zone of control. It is worth repeating that this village was only 5 km from the fort.

Similar indigenous material signatures are also visible in the Native Californian village at Fort Ross (Lightfoot, 2005:166). The Kashaya Pomo women who lived at Fort Ross (both in the Native Californian and Native Alaskan villages) apparently were relatively free to circulate between the fort and their home villages and documents reveal that marriages to Native Alaskans were relatively short-lived (Lightfoot, 2005:146, 171; Martinez, 1997:143). This suggests that the Kashaya Pomo who resided at Fort Ross cannot be considered distinct from the Pomo population who remained in the interior. Furthermore, colonial social controls exerted at the outlying Russian ranches and farms likely were even less than those present at the fort.

Pomo communities (and women especially) therefore utilized the resources (material and sexual) at Fort Ross intermittently and opportunistically, and preserved their relative autonomy by deploying foodstuffs, goods, and information received in the Russian colony for the benefit of the home villages (Lightfoot, 2005:180). Fort Ross's small radius of control no doubt facilitated the significant degree of Native Californian cultural continuity seen both at the fort and in its hinterland. All of this suggests that the relationship between the Russians and the bulk of the Kashaya Pomo population is better described as cultural entanglement than as colonialism.

Complicating Colonizer and Colonized: Ireland, Cape Colony, and Colonial California

The three cases discussed in this section more readily fit the definition of "colonialism": in each instance, large groups of colonists were able to establish direct territorial control over indigenous groups. Such colonial situations demonstrate the intricacies of group interest and identity politics. Complex "cross-cutting social networks" (Lightfoot and Martinez, 1995) were established and the creation and negotiation of new, creolized cultural forms and novel forms of identity were both widespread and intense (Deagan, 1983, 1996; Loren, 2001, 2005).

Irish responses to the large-scale English attempt to extend spatial control over their homeland in the sixteenth century provide a clear demonstration that colonized populations are heterogeneous and divided in their interests. James Delle (1999) discusses the 1565–1605 English expansion into Munster, the southwesternmost of Ireland's four provinces. Sixteenth-century English encroachment in Munster followed on an earlier instance of English colonialism: Anglo-Normans had expanded into the region in the twelfth century, where they established themselves as local elites and eventually adopted many local cultural forms (including language, architecture, and kinship norms). Although these "Old English" populations had maintained some ties and allegiance to England, they were as adversely impacted by the sixteenth-century colonization as were Gaelic populations. The Anglo-Norman family of the Earl of Desmond led a series of major rebellions against the incursions of the "New English" during 1569–1583, which were bloodily repressed.

Delle (1999) uses elite architecture constructed during the lengthy process of English re-assertion of control in Munster to monitor the responses of Gaelic and Anglo-Norman elites to the renewed English colonial project. Major contrasts exist between Gaelic tower houses—four- or five-storied buildings where the main hall was located on the top floor—and English-style structures that were symmetrical, oriented horizontally rather than vertically, and had diplomatically significant spaces on the ground floor (Delle, 1999:23). Some local elites used combinations of Gaelic- and English-style architecture to express their allegiance to the colonists, while other leaders continued to build traditional tower houses as a gesture of resistance.

Early on, Thomas Butler, the "Old English" Earl of Ormond (a distant cousin of England's Queen Elizabeth and a self-professed Protestant), constructed a Tudor-style house in Carrick-on-Suir during the 1560s, clearly expressing his sympathy to the English colonial project (Delle, 1999:23). Kanturk Castle, erected by the Gaelic chieftain

McDonough McCarthy in the 1590s, provides an example of what Delle (1999:27) labels "spatial collusion." The never-completed castle contains a multistory "flanker" at each corner reminiscent of the tower house form, but the overall plan was "more likely built to resemble the English house forms being constructed by the new English elite" (Delle, 1999:27). Intriguingly, the castle contains two separate entrances (Delle, 1999:Figs. 8 and 9): an ornate doorway with multistory columns that copied English models, and a simpler doorway "very similar in form and decoration to arches found in tower houses throughout Munster" (Delle, 1999:29). Loughmoe Castle in County Tipperary expressed a similar mixture of styles by attaching an English-style house to a preexisting tower house, with a second tower added to complete the symmetry of the building (Delle, 1999:Fig. 10). In contrast, other Irish elites continued to construct tower houses in traditional form, exemplified by the circa 1585 Ballynacarriga Castle (Delle, 1999:Figs. 11 and 12).

While the social effects of these elite materializations depend on their being seen and used by varying segments of the colonizing and colonized populations (see Matthews et al., 2002:113–119), the diversity in responses to English colonization illustrates that colonized groups were far from monolithic, and that responses to colonial incursions are difficult to predict based on preexisting allegiances and antagonisms. Both Anglo-Norman and Gaelic leaders built "creolized" dwellings that made nods to English cultural forms, and Gaelic and "Old English" leaders resisted English colonialism, both symbolically and militarily. English colonial officials used this mix of allegiances and antagonisms to their advantage, often pitting Irish factions against another.

A contrasting point about the tensions and contradictions in the designs of colonizing elites is presented by locally made, coarse earthenware copies of Dutch ceramic vessel forms found in the Cape Colony in South Africa. Stacey Jordan and Carmel Schrire (2002) explore the interesting social implications of these vessels, arguing that the local copies served to "articulate the statuses and identities being produced" within the colony (Jordan and Schrire, 2002:255). The vessels serve as a key to social tensions and contradictions within the colonizing population.

The Dutch East India Company (or VOC) established a post at the Cape of Good Hope in 1652 to provide meat for ships heading east (see also Hall, 2000; Schrire, 1995). The Cape Colony became a thoroughly cosmopolitan community, including (among others) Dutch immigrants, indigenous Khoikhoi, Indonesian slaves, and Chinese convicts. Little Dutch pottery was imported to the colony, but by 1665, the VOC brought the first of what proved to be at least 19 European potters to the Cape. Thin-section analysis has determined that these potters made local versions of Dutch vessel forms such as tripod cooking pots, skillets, saucepans, and dripping pans (Jordan and Schrire, 2002:246–248). While this might appear to be a straightforward attempt to replicate homeland culture in a colonial location, archaeology has revealed that the coarse earthenware vessels were used entirely by lower-class residents of the colony; elites used metal vessels and imported ceramics (such as porcelain) instead.

Why did the VOC go through the effort of importing potters to make wares for the lower social stratum? Jordan and Schrire (2002:258) argue that copy vessels expressed VOC officials' belief that they could engineer society within the colony. The use of locally produced, Dutch-style ceramics created spheres of material culture that separated elites from commoners and also Europeans from "others." In the eyes of company elites, by allowing lower-class Europeans to make daily material reference to the Netherlands, these vessels helped distinguish lower-class Dutch residents from slaves (two groups who otherwise were treated in a relatively similar fashion). The copy wares also had an assimilative purpose, in that they were intended to introduce the African and Asian wives of lower-class European men to Dutch-style domesticity.

In practice, company-funded ceramics ended up doing something far different than creating a "Holland on the Cape." The VOC elite's fantasy of control was subverted by the social realities of the vessels' users. Dutch copy pottery predominantly ended up being used by non-white women, particularly local Khoikhoi women and Indonesian slaves, who produced a cuisine that was far from Dutch; cooking on the Cape was highly creolized, using rice, Indonesian-style spicy relishes, and other culinary elements foreign to the metropolitan table.

Jordan and Schrire (2002:264) conclude that "[d]espite the fact that the vessel forms were intended to be icons of Dutch domesticity and morality, they actually contributed to a specifically colonial Eurasian household, participating in the creolization of both the foodways milieu and the Cape household itself."

Barbara Voss's (2005, 2008a) study of settler dynamics in the San Francisco Presidio in California demonstrates broadscale changes in the assertion of identity among a colonizing population. Spanish colonization of Alta California proceeded after 1769 in order to secure the region against Russian and British expansion. Spain deployed a time-tested colonizing plan, using three types of settlement: missions, where Native Californians were to be converted to Christianity and agricultural labor; pueblos or civilian settlements; and presidios, fortifications that also served as "the administrative centers, judicial seats, marketplaces, and residential nuclei of isolated frontier districts" (Voss, 2005:462). The degree to which Spanish colonists were able to assert control over the indigenous population in Alta California is remarkable. Extension of colonial dominance likely rested on European-induced environmental alterations in a somewhat brittle ecosystem; major enforced changes in subsistence practices toward agriculture and away from gathering, hunting, and fishing; the military backup presidios provided to missions sparsely populated with Europeans; and raw force, including systematic use of sexual violence (Allen, 1998; Lightfoot, 2005; Voss, 2000).

Within presidios and pueblos, the settler population was controlled in part through the *sistema de castas*, a complex set of legal categories for social identity based on "purity of blood" (Voss, 2005:463). The *casta* system made core distinctions between Spanish, African, and Native American ethnicities and established categories for the children of interethnic marriages; one's position within the system helped determine the range of occupations that could be occupied, potential marriage partners, and legal treatment. However, as with "top-down" VOC plans for ceramic use in the Cape Colony, the social reality in Spain's California colonies was significantly more complex. Voss documents that many of the settlers living in the San Francisco Presidio (founded in 1776) were themselves the descendants of Mesoamerican Indians and Africans: "the colonizers were themselves the very product of colonization" (Voss, 2005:465). The *casta* system also encouraged a certain amount of fluidity; certain people were able to manipulate their status over time, and at times changing dress and behavior was sufficient to alter the category within which one was placed (Voss, 2005:463–464; see also Loren, 2005). Census records indicate that Presidio residents were classified as Español, Mestizo, Mulato, and Indio.

Despite the potential for social division inherent in the *casta* system, archaeological evidence from the San Francisco Presidio suggests that its residents used material culture, foodways, and architecture to develop a shared identity that transcended their multiple origins. Excavations at the site focused on a very large trash midden within Building 13 that has been tightly dated to 1780–1800 (Voss, 2005:465). A variety of evidence from the Building 13 midden demonstrates relative material homogeneity among the ethnically diverse presidio population (Voss, 2005: 465–467). Hollowware cooking pots—many of which were locally produced, undecorated wares—predominate in the midden ceramic assemblage, and vessel size analysis indicates that most households cooked and consumed meals individually. Food remains are also relatively uniform and overwhelmingly consist of domesticated species, such as cattle, wheat, corn, buckwheat, peas, and beans. Adornment items were relatively scarce.

The architecture at the site reveals a complementary pattern. Initial residential construction at the Presidio was done with a wide variety of building materials and techniques, many of which were "endemic to the northwest Mexican provinces from which the presidial settlers had been recruited" (Voss, 2005:468). However, by the 1790s, adobe began to be used with much greater frequency, and an 1815 expansion of the quadrangle appears to have been built entirely of adobe. Mud–brick architecture does not function particularly well in foggy Northern California, and contemporary observers expressed their frustration with the material. Rather than being adopted for a functional reason, Voss (2005:470) suggests that adobe's main advantage may have been that it alone "was distinctly colonial." Residential forms and house size also became increasingly standardized over time, and the presidio compound was fully enclosed and its exterior facade made uniform.

Surprisingly, material traits associated with indigenous Californians are nearly absent at the San

Francisco Presidio, including Native-produced ceramics, ground stone tools, wild foods (particularly the deer, shellfish, wild grass seeds, and acorns typical in the local diet), and (eventually) indigenous forms of house construction. Voss suggests that the settler community at the presidio gradually adopted a relatively uniform set of material culture and residential practices that served purposes of internal unification. Crucially, it also differentiated residents from local Native Californian groups: "Given that most of the colonists were themselves descended at least in part from colonized Mesoamerican Indians, it seems possible that colonial military settlers were materializing through these practices what could not be accomplished through biological phenotype alone: a physical distinction between colonizers and colonized" (Voss, 2005:467). Voss suggests that the presidio's residents as a community created a new regional settler identity as *Californios* and that this can be termed a process of ethnogenesis (Voss, 2005:465).

These three cases complicate the colonizer/colonized dynamic in situations of true colonialism. Elite architecture in Munster illustrates that colonized populations were internally divided and that some local leaders actively sought out positions of power as intermediaries for the colonizing group. The Cape Colony ceramics show the unintended consequences of elite actions upon diverse subordinate groups within settler society. The San Francsico Presidio evidence demonstrates that the cultural diversity seen in many colonial contexts, a product both of the intermingling of people from diverse backgrounds and the divisive intentions of legal codes like the *casta* system, could on occasion be overcome with new forms of unity. It should be noted that the new unity of *Californios* was primarily an assertion and solidification of the power over indigenous groups that the presidio's residents continued to hold.

Postcolumbian Archaeology as Colonialism/Decolonizing Postcolumbian Archaeology

It is crucial to note that the archaeology of the modern European expansion not only studies colonialism, but also in some ways embodies colonialism. Postcolumbian archaeology often impacts the members of descendant communities who had subaltern positions historically and continue to do so today, and if they are not vigilant archaeologists may use their privileged social position to reinforce the political-economic relations of domination present in the wider society. Descendants of the people who lived at the sites being excavated arguably have the *most* at stake when archaeology takes place, since archaeology may desecrate the graves of their ancestors, legitimize or delegitimize claims to occupation of an area in the past, and/or form the basis for land-use and policy decisions. But descendant communities frequently are legally, physically, and intellectually barred from interpretation of their own past, and receive little of the material benefits of archaeology (including jobs, prestige, knowledge about cultural resources, and the like).

There is no question that archaeology in the past acted in a colonial manner; this colonialism encompassed the day-to-day conduct of fieldwork, the theoretical models used to interpret archaeological remains, and the structure of archaeological discourse. Archaeologists were primarily upper-class white men from Europe and its colonies and their careers and research agendas were pursued with little to no input from subaltern descendant communities. McNiven and Russell (2005) provide a critical overview of the colonial aspects of theories about cultural difference and history that have been (and in some cases continue to be) invoked by archaeologists.

The 1915–1929 excavations undertaken at Pecos Pueblo, New Mexico, under the direction of Alfred V. Kidder (1958; Thomas, 2000:106–110, 216–218) provide a key example of archaeological colonialism. Pecos Pueblo was occupied from the 1200s until its abandonment in 1838; the site contained four sequential Spanish mission churches used in the seventeenth through nineteenth century (Levine, 1999:18–26). While Kidder's rigorous use of stratigraphic excavation and seriation and the project's contributions to the chronology of the region rightly have been cited as methodological breakthroughs in American archaeology (Thomas, 1999), the project also unearthed 1,938 burials, including 56 interments from the nave of one of the mission churches, and 59 "burials at length" (extended burials), most of which Kidder (1958:279, 299–305) felt were "post-Spanish." Excavations

took place with minimal input from the descendant community living only 110 km away at Jemez Pueblo. The excavated skeletons (subsequently housed at the Robert S. Peabody Museum in Andover, Massachusetts) were used by the physical anthropologist Earnest A. Hooton to argue that the inhabitants of the Pueblo were composed of multiple racial stocks, some "primitive" and some "capable of higher cultural development" (Hooton, 1930:355, 362). As a consequence of the federal Native American Graves Protection and Repatriation Act (NAGPRA) of 1990, the remains were returned to descendants and reburied at Pecos Pueblo in 1999 (Thomas, 2000:216–218).

While legislative action and ethical reassessments over the past 25 years have blunted some of the most colonial aspects of archaeology, traces of earlier practices remain. As Smith and Wobst (2005a:5) note, "relationships between archaeologists and members of Indigenous groups continue to be unequal and asymmetrical." Colonialism remains ingrained in some legal processes. For example, in New York state, American Indian graves on private property receive little legal protection (since most are unmarked, they are not legally classified as "cemeteries"), and many cultural resource management regulations have not been amended so that American Indian Nations receive timely notification about impacts on archaeological sites and other areas of significance (Amato, 2002). Even NAGPRA, hailed as a significant victory for indigenous groups in the United States, imposed tight deadlines and severe financial pressure on indigenous groups seeking to recover human remains and artifacts under the law (Ferguson et al., 1996; Fine-Dare, 2002). Developments in the high-profile Kennewick Man case seemingly guarantee mainstream archaeologists relatively unrestricted access to older sites occupied by Indian ancestors in the name of investigating "universal" human heritage (Fine-Dare, 2005; Thomas, 2000).

Many archaeologists agree that there is a pressing need to "decolonize" the practice and theory of contemporary archaeology (e.g., Silliman, 2008; Smith and Wobst, 2005b; Watkins, 2000). The most direct means to this end is to facilitate greater indigenous participation in archaeology and increasing numbers of indigenous people are becoming archaeologists and cultural resource managers (Smith and Wobst 2005a). However, archaeological practitioners (perhaps especially in Postcolumbian archaeology) remain overwhelmingly of European descent, suggesting that revision of standard procedures to produce relations of cultural entanglement should be an initial goal. One of the major ways to do so is to replace the "top-down" structure of archaeological discourse with one that integrates members of the descendant communities, archaeologists, and other interested parties into the research process as equal partners.

Applied anthropologists (e.g., Chambers, 2004; Van Willigen, 2002) have developed a typology that describes different forms of participation; their distinction between consultation and collaboration is particularly useful. *Consultation* describes situations where archaeologists present the descendant community with a fully developed research plan and descendants are given the opportunity to comment. While this process provides descendants with the opportunity to restrict the actions of archaeologists (by curtailing actions that are culturally interpreted as desecration, for example), the descendant community's role is largely reactive. *Collaboration* describes a situation where archaeologists and descendant communities mutually develop the structure and content of an archaeological endeavor. Two projects in the archaeology of Postcolumbian indigenous sites illustrate the distinction.

Janet Spector's (1993) well-known investigation at Little Rapids, a nineteenth-century Wahpeton Dakota village in present-day Minnesota, provides clear examples of both processes. During the early stages of her project, Spector sent a letter to the Minnesota Indian Affairs Intertribal Board (an organization of indigenous groups) describing her intended fieldwork, and the board responded with their approval for the project (Spector, 1993:10–11). Here, Spector *consulted* with the board and gave them an opportunity to assess and potentially alter her research design, but she did so only after plans for the dig were already at a relatively advanced stage—the site to be excavated had already been picked out, and the research goals of investigating the site from a gendered perspective had been determined. Spector subsequently developed ties with Chris Cavender, a Wahpeton cultural leader. Together they collaboratively developed a curriculum for the 1986 field school at the site, incorporating lessons in Dakota language

and culture, and interdisciplinary presentations on local history and ecology (Spector, 1993:13–17). Even here, however, indigenous involvement with the archaeological end of the project was limited: while the Minnesota Indian Affairs Council called off excavations that had impacted a possible dance ground (Spector, 1993:121), Dakotas had little positive impact on the conduct of fieldwork.

As Spector's work demonstrates, many projects begin with consultation and develop into collaboration only when both parties have enough experience with each other to form a relationship of mutual, if not unqualified, trust. Few archaeological projects to date have fully realized collaboration at every step of the archaeological process, which requires descendant community input into deciding whether excavation is to take place; forming research questions; selecting sites; making decisions about field procedures; determining what types of evidence should and should not be collected in the field; specifying where collections should be curated and how they should be treated; analyzing the data; and writing up and publishing the results of the project. The 1993 Pathways project between the Innu Nation of Canada and the Arctic Studies Center of the Smithsonian Institution (Loring and Ashini, 2000:180–184) provides an excellent example of a thoroughly collaborative project that accomplished each party's distinctive goals.

The project, developed by Smithsonian archaeologist Stephen Loring and Daniel Ashini of the Innu Cultural Center, focused on Innu use of their ancestral territory in the early twentieth century, prior to their resettlement in sedentary villages by the Canadian government. Innu goals for the project were to obtain cultural resource management training for Nation members, facilitate on-site intergenerational contact between elders and youth in their traditional territory, and help document occupation of that territory for land-claims purposes. Archaeologists intended to collect excavation data, document new sites, and record oral histories associated with specific sites. Project members spent a month in ancestral Innu territory. The group initiated some excavations, aided by thoroughly trained community members. But mainly the group traveled to different sites and resource areas at the bequest of elders who had hunted, fished, and gathered on the land before resettlement. The elders taught Innu youth subsistence practices, including hunting, processing, and cooking techniques. The opportunity to record Innu oral histories about specific sites and practices as they were being told to the youths perhaps provided the main value of the project to archaeologists.

Collaboration in the Pathways project did not stop with field procedures; it has also extended to written work. Loring and Ashini's (2000) co-written piece contains explicit discussion of contemporary Innu political-economic problems, linking the past to the present in a way that few archaeological texts do. It also frankly recognizes that local knowledge and archaeological data do not always agree. The authors outline how archaeology provides information that (a) confirms what the Innu already knew; (b) contributes to an elaboration of Innu perceptions of the past; and (c) offers perceptions "not generally recognized by the Innu" (Loring and Ashini, 2000:174). The final category includes the surprising finding that sustained Innu reliance on caribou hunting first developed during the eighteenth century as a consequence of their displacement from coastal environments by Inuit groups (Loring and Ashini, 2000:175). The article demonstrates that coauthorship need not mean watered-down "writing by committee" but instead can include an acknowledgment of differences. Control over writing is something that archaeologists very rarely surrender (see also Warner and Baldwin, 2004), but coauthorship may be one of the most important steps to developing collaborative projects with lasting and widespread effects. Excavations only affect the small number of people that actually participate and those they tell about the project, but durable books, reports, and articles can be read by many people across time and space. "Digging together" may be the most effective way to improve relations in the short term, but long-term improvement in the relationship between archaeologists of European descent and subaltern descendant groups requires that archaeologists learn to *write* in new ways as well.

To sum up, these examples of archaeological projects investigating the post-1415 European expansion illustrate that archaeologists must be vigilant in determining the specific contours of power relations. Not all Postcolumbian intercultural relations can be characterized as colonialism, and to label situations as "colonial" without adequate analysis of the structural limitations on the actions of

both colonizer and colonized may underestimate the power and autonomy of indigenous groups in the past. Archaeologists must also be attentive toward the political-economic implications of their actions in the present, so as to transform the colonial structure of prior archaeological discourse and practice into a pluralistic archaeology thoroughly entangled with the concerns of descendant communities.

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Landscape Approaches in Historical Archaeology: The Archaeology of Places

Nicole Branton

Introduction

Landscape archaeology is a framework for modeling the ways that people in the past conceptualized, organized, and manipulated their environments and the ways that those places have shaped their occupants' behaviors and identities. Landscape archaeology is concerned with both the natural and the human-built environment, as well as places that are strictly symbolic. The landscapes in landscape archaeology may be as small as a single household or garden or as large as an empire. They may also include a number of alternate landscapes nested within them. Although resource exploitation, class, and power are frequent topics of landscape archaeology, landscape approaches are concerned with spatial, not necessarily ecological or economic, relationships. While similar to settlement archaeology and ecological archaeology, landscape approaches model places and space as dynamic participants in past behavior, not merely setting (affecting human action) or artifact (affected by human action). Landscape archaeology can be said to be the archaeology of "place" (Anschuetz et al., 2001:159), a paradigm that in its simplicity encompasses all the material elements of human–environment relationships through time (also see Pauls, 2006).

This chapter explores the landscape paradigm in historical archaeology, primarily from the perspective of North American historical archaeology. After defining the components of landscape, it presents key themes in the application of landscape to the archaeology of the historical past. The chapter concludes with a case study that illustrates the suitability of a landscape approach to the analysis of the material components of place, identity, and power.

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Landscape and Its Elements

Landscapes are bounded spaces in which human behaviors occur. Landscape refers not only to scale but to the nature and context of the bounded space and the human behaviors that occur within it. However, a landscape is not simply a container for human action. A critical component of landscape approaches in archaeology is the interrelationship between a place and the human behaviors that occur within it.

The natural occurrence of such minerals as gold and silver, for example, made the mountains of Colorado an ideal setting for the gold- and silver-mining industries of the late nineteenth and early twentieth centuries, drawing first prospectors and then individual miners, mining companies, railroads, and eventually a variety of environmental-remediation professionals to the area. Today, the mountain mining landscape has been dramatically altered by the activities of these people and is marked by features such as massive waste rock and slag piles, adits, mills, mining towns, and railroads, all created by humans in order to extract resources. Coloradans today who have no personal experience of silver or gold mining are affected by

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these symbolic landscapes that communicate the history of mining even after most veins have been emptied. This is the interplay of humans and environment that characterizes landscape. What distinguishes archaeological landscapes from other environments (or nonsocial landscapes) is their ability to signal and shape human behavior, the use to which humans actively put them to signal and shape desired behavior, and the archaeologist's ability to interpret past human behaviors from their physical and documentary remains.

Landscape approaches always reference spatial relationships, such as differential access to resources, visibility, nearness or distance to other places, and such less ecological qualities as beauty, highness, lushness, color, or relative height in comparison to other places. The built environment, in particular, is often communicative in terms of beauty, differential power, and symbology and is often consciously constructed to convey these qualities.

The concepts of place and space are the building blocks of landscape theory and provide an important vocabulary for landscape analysis. Place is an extraordinarily common concept that is profoundly difficult to define. Most people recognize a habitation or a region as "home," experience nostalgic longing for it when absent from it, and even restrict certain activities to its boundaries. There are locations such as home towns, colleges, and previous vacation spots that they return to again and again to try to reconnect with past experiences.

Place refers to this common human tendency to attach cultural meaning (often connected to individual or group memory) to discrete locations. The term applies not only to a physical locus of activity but also to an entire suite of behaviors that occur in that location or in reference to it, including commemoration, ceremonies, storytelling, and identity formation (De Cunzo and Ernstein, 2006; Holtorf and Williams, 2006). Places shape human activities by their physical construction and have their physical constructions shaped by human activities. They are not simply locale, although their physical characteristics are significant in their life histories. Rodman (1992:642) suggests that "places not only feature in inhabitants' (and geographers') narratives, they are narratives in their own right." This concept of place as text can be problematic for archaeologists, particularly since places are "multivocal," having different meanings to social groups or individuals within a group. These issues can be mitigated by careful attention to scale and the use of multiple lines of evidence. Oral history is a particularly useful tool for accessing the narrative meanings of multivocal places (Branton, 2004; Whiteley, 2002).

In transferring these abstract concepts to archaeological analysis, Preucel and Meskell (2004:216) explain that "Space is usually defined as a natural science concept, the physical setting within which everything occurs," while "Places can be regarded as the outcome of the social process of valuing space." In other words, place emphasizes the human component of space and "opens up the possibility of focused work rather than abstract, decontextualized spatial analyses" (Blake, 2004:235). "Space" is also used in landscape archaeology to describe the contextually empty area between places.

Landscape expands the concept of place to a network of places that function as both setting and narrative. Like place, landscape is a slippery concept that seems to be redefined by each scholar who handles it. For a range of examples, see Anschuetz et al. (2001), Greider and Garkovich (1994), Hirsch (1995), Knapp and Ashmore (1999), Marquardt and Crumley (1987), Rossignol (1992), Rotman (2003), Tilley (1994), and Whittlesey (1998). While they vary in their particulars, each of these definitions recognizes that landscape describes the relationships between humans and their spatial, physical environments. Definitions vary in the degree to which humans and their settings influence *each other*, and whether this influence can be expanded to include symbolic components. In this sense, landscape approaches may also include such nonphysical, social components as place attachment, commemoration, and storytelling, which are not inherent in the physical characteristics of a place. These behaviors may occur only at prescribed places or in reference to those places, often because of culturally significant events that occurred there. Archaeologists' definitions of landscape also vary in terms of whether these symbolic and behavioral components of place are observable archaeologically.

Landscape archaeology is characterized by a "cacophony of voices and landscapes" (Bender, 1993:275), but it typically refers to two different things. First, it may be used as a *scale* of analysis that addresses past behavior across multiple localities,

transcending the traditional "site" as a unit of observation and instead observing past activities at the scale of neighborhood, colony, or region. This dissatisfaction with the site concept is particularly understandable in historical archaeology, which deals with stratified societies in which many social units coexist in what would be called the same "site." Landscape approaches treat this co-occupation as "nested" landscapes. The scale of a landscape may be defined by social as well as physiographic boundaries, as by the diaspora of a given ethnic group.

The second usage of the term "landscape archaeology" is as an interpretive framework that specifically addresses the relationships between past human behaviors and the physical (or social) space in which they occurred. This usage grew out of processual approaches such as settlement archaeology and human ecology but has also expanded to include a variety of more symbolic models of human–land interactions.

For a landscape analysis to be coherent, the landscape must have clearly defined boundaries. Landscapes are broad and complex, but they nonetheless reference "a singular moment of material practice" (Rotman, 2003), and it is impossible to define that moment (which may in fact represent months, years, or generations) without clearly defined boundaries. Boundaries may be physical or ideational but must originate in the social context and must have emic utility. They must be spatial, but not necessarily "real," as in the case of Traditional Cultural Properties (in U.S. historic preservation law) or spiritual places. Archaeologists working with landscape must consciously and explicitly define their units of analysis in terms of their physical limitations (a watershed or mining district), temporal setting (the American Civil War or the Great Depression of 1929 to ca. 1939), and, most importantly, its sociocultural context, or the people to whom the landscape is significant.

The last is perhaps the most critical boundary for meaningful landscape analysis. Landscapes have meaning to a discrete group of people at a defined time and place. Thus, landscapes are said to be "multilocal" (sharing features with other overlapping landscapes) as well as "multivocal" (carrying and communicating different meanings to different people) (Rodman, 1992). Historical archaeology has made significant contributions to landscape theory through its documentation of the material correlates of multiple coexisting and overlapping cultural landscapes in multiethnic or otherwise stratified societies. Knapp and Ashmore (1999; also Tilley, 1994:20) label these landscapes "nested landscapes." This concept acknowledges that "family, kin, community, gender and age/experience would have linked land, dwellings, and ceremonial spaces" (Knapp and Ashmore, 1999:16–17) that occupy the same physical spaces but may hold very different meanings to each group. Kealhofer (1999:61) clarifies that "How landscape is structured shapes individuals' actions, but different individuals and different groups perceive the same landscape differently." A similar relationship, called "cultural landscape layering" (Stoffle et al., 2003:104), exists when a given place functions in multiple cultural landscapes. Given this complexity, it is essential that landscape analysis explicitly defines the social group with which a landscape is identified.

Landscape Approaches in Historical Archaeology

Landscape is not unique to historical archaeology, or even to archaeology in general. In applying landscape concepts, historical archaeologists have borrowed heavily from anthropology (Hall, 1969; Hirsch, 1995; Hirsch and O'Hanlon, 1995; Rodman, 1992), cultural geography (Penning-Rowsell and Lowenthal, 1986; Sauer, 1925), and urban planning, architectural history, and other social sciences (Greider and Garkovich, 1994; Lowenthal, 1986; Tuan, 1977, 1991; Zube et al., 1982). Historical archaeology's material culture and theoretical orientations make it ideally suited to exploiting the subtleties of landscape's flexibility as "an unstable category, sitting uneasily between opposed ecological or 'naturalistic' and ideological or 'culturological' approaches to human society" (Tilley, 1994:37). This unique ability to draw together multiple lines of evidence and model a vast range of human–place interactions in the past makes landscape archaeology an ideal tool for examining things as diverse as tenements and utopian communities, formal gardens and mining camps, natural resources and creation stories. Landscape approaches embrace, and

even demand, a rich variety of evidence (artifacts, text, and oral history). Many of the traditional lines of inquiry in historical archaeology—especially colonialism, urbanization, globalization, ethnogenesis, and class conflict—demand a framework that melds the physical and ideational.

The historical development of landscape archaeology has been well documented by other authors (Anschuetz et al., 2001; Ashmore, 2004; Bender, 1993; Knapp and Ashmore, 1999; Preucel and Meskell, 2004; Rossignol, 1992; Stoddart, 2000a; Yentsch, 1996), but some attention to the foundations of landscape approaches is warranted in order to clarify key issues and the directions in which this subfield is moving. Landscape is many things to many researchers. At its simplest and clearest, a landscape is "a piece of topography bounded by its use by a given social group" (Rockman, 2003:13). Where theoretical opinions diverge in archaeology is at what kind of use defines a landscape and what scale of topography or built environment it must include. The topography of a cultural landscape may consist of such natural elements as mountains or of such human-built elements as architecture. More murkily, the topography of a landscape may also consist of locations that are exclusively symbolic.

Until recently, archaeological treatments of landscape have tended to split into two camps, those that emphasized the explicit, positivist characteristics of landscape (physical features, land use, and economic or ecological limitations of environments) and those that emphasized the inherent characteristics of landscape (the symbolic role of architecture and spatial organization and the "meaning" of places). The fracture between explicit and inherent approaches corresponded generally, with some exceptions, with whether the archaeologist was American (explicit) or British (inherent). In *Ideas of Landscape,* British archaeologist Matthew Johnson (2007) explores this difference in more depth and proposes an "alternative agenda" for a more interdisciplinary historic landscape archaeology that capitalizes on archaeology's empirical strengths and is relevant to contemporary social concerns. Another recent compilation of articles, *Landscapes under Pressure: Theory and Practice of Cultural Heritage Research and Preservation,* edited by Ludomir Lozny (2006), addresses the broad spectrum of views on cultural landscapes as well as the practical considerations of identifying and managing them.

Explicit landscape approaches model landscapes as settings for action or as units of analysis. They are frequently concerned with exploring the limitations of the site concept for processual archaeology and the effects of natural and cultural transformation processes on land occupied by humans (Dunnell, 1992; Rossignol, 1992). Positivist landscape researchers draw theoretically from cultural ecology and the scientific approaches of the "New Archaeology," particularly nearest-neighbor analysis, settlement archaeology, and central-place theory, and are concerned with explicit, positivistic approaches to human spatiality. Explicit approaches treat landscape as land use. A recent innovation in explicit approaches to landscape is "landscape learning," a framework that describes the process by which humans gain and use environmental knowledge during colonization of new locations (Meltzer, 2003; Rockman, 2003). Although landscape learning is primarily concerned with environmental constraints and human adaptations to them (land use), it emphasizes cognition and identity (Hardesty, 2003), and social knowledge is critical in the learning process.

Researchers who apply more inherent approaches to landscape archaeology tend to draw theoretically from social theory (Ashmore, 2004; Blake, 2004), such as phenomenology (Bender, 1993; Tilley, 1994). These studies emphasize humans' experience and perception of landscapes, as well as "how landscape features are socialized and how cultural features become naturalized" (Ashmore, 2004). Phenomenological landscape studies emphasize the ways that the physical construction of places conditions cultural behavior and the creation of memory. Blake (2004:236) warns that phenomenological approaches "tend to universalize the way humans experience, treating experience as a precultural process onto which contingently derived meanings are pasted." Critical in the work of inherent landscape archaeology is an emphasis on the creation of memory and the meaning of significant places for identity formation.

Although landscape archaeology remains theoretically diverse, the dichotomy between processual and postprocessual approaches to historical landscapes shows signs of blurring. This may be in part due to the "usefully ambiguous" (Gosden and Head, 1994) nature of landscape itself, which demonstrates

the interconnectedness of people and their environments (Anschuetz et al., 2001; Lekson, 1996). Historical archaeologists are increasingly combining both positivist and post-positivist approaches to landscape, each of which facilitates particular lines of inquiry. Metheny (1996:384) offers an inclusive definition of landscape theory in historical archaeology. Landscape archaeology is:

> concerned with both the conscious and the unconscious shaping of the land: with the processes of organizing space or altering the land for a particular purpose, be it religious, economic, social, political, cultural, or symbolic; with the unintended consequences of land use and alteration; with the role and symbolic content of landscape in its various contexts and its role in the construction of myth and history; and with the enactment and shaping of human behavior within the landscape.

Metheny solves the formidable problem of defining what landscape archaeology *is* by providing a list of what it *does*. This definition also clearly delineates how landscape functions as two different artifacts—one that is physically shaped by human activities and another that is a symbolic archive of past social relations.

Issues and Themes in Landscape Archaeology

Gardens as Formal Landscapes

Historical archaeology's first forays into landscape grew naturally from the discipline's beginnings in historic preservation. The reconstruction of historically important sites such as Jamestown, based on archaeological as well as textual evidence, was often the reconstruction of past landscapes. Archaeology of formal gardens has been a particularly fertile subfield in historical archaeology (Beaudry, 1996; Brown and Samford, 1990; Leone, 1989; Leone et al., 1988; Metheny et al., 1996; Upton, 1988), where documentation of both garden owners and their built environments is frequently available to aid interpretation and where the units of analysis are landscapes that "were usually designed and created to be seen and experienced" (Rotman and Nassaney, 1997:42). Garden archaeology therefore moved rapidly from garden reconstruction to analysis of the use of formal gardens to communicate messages about social order and status. Garden archaeology has yielded significant studies that are both explicit and inherent. Metheny et al.'s (1996) careful presentation of garden archaeology method at the Morven estate marries explicit method and inherent interpretation, linking excavated landscape features to an "emic grid" of perspective based on historical landscaping practices and architectural analysis.

Gardens are formally designed landscapes that are consciously designed to reflect the real or desired economic, social, or political status of their builders. Gardens may be considered according to how they conform to such formal aesthetic standards as the Georgian order or traditional English landscape gardens, or they may convey the owner's ability to tame wilderness (Kealhofer, 1999). In their physical construction, formal gardens force visitors to experience them from a strictly controlled perspective. Landscape archaeology of gardens attends to "how the organization of sight, control of movement, and the structure and pattern of space construct our subjectivity—our sense of who we are and how we relate to one another and to the world around us" (Kryder-Reid, 1996:228–229).

Spatiality of Power Relations

Landscape approaches are useful tools for those historical archaeologists who study the material reflections of power relations. Power is reflected in the landscape both through differential access to resources (Hautaniemi and Rotman, 2003; Paynter, 1982) and the manipulation of the built environment to reproduce and naturalize the existing (or desired) ideology of the powerful. Nassaney and Abel (2000) write, "In industrial capitalism, the built environment is a material expression of order and control that is designed to maximize profit through spatial hegemony." The built environment may be constructed to physically constrain workers, to discourage labor organization, to facilitate surveillance, or simply to inspire awe of a land- or factory owner's power over nature. The spatial components of power relations have been apparent in the historical archaeology of work sites (Beaudry and Mrozowski, 2001; Nassaney and

Abel, 2000; Mrozowski et al., 1996; Pappas, 2004; Shackel and Larsen, 2000) and plantations (Delle, 1999, 2000; Epperson, 2000; Young, 2003).

Manipulation of space is not, however, exclusively a tool of the powerful. Several historical archaeological studies (Branton, 2004; Casella, 2001; Delle, 2000; Ruppel et al., 2003; Shackel and Larsen, 2000) have uncovered the manipulation of space and the built environment by subaltern groups, especially as strategies of resistance. The spatial construction of mining towns illustrates not only the almost complete control that mine owners exerted over their workers but also the gender, status, and ethnic divisions maintained among miners themselves (Baxter, 2002; Hardesty, 1998; Lawrence, 1998). Frequently, subordinated groups manipulate their spaces in order to create private places where activities may occur outside of the view of the powerful. This issue of surveillance is an emerging issue in the spatiality of power relations in historical archaeology (Epperson, 2000). The spatiality of resistance also includes symbolic identification with culturally critical places, such as memorials.

Pappas's (2004) analysis of community structure in a California logging camp illustrates the use of spatial organization to facilitate corporate paternalism. At considerable cost and difficulty, the Pickering Logging Corporation designed the Soap Creek Pass camp in a way that encouraged nested households within the larger context of the camp. Families were provided increased privacy in "family areas," while remaining on the site to model appropriate family living for single loggers. Bachelors, meanwhile, were housed in the central area of the camp in mobile buildings that suited their transient status; these single-laborer cabins were located so as to be visible at all times from their supervisors' homes.

Interior Space, Public and Private

Until recently, interior space received relatively little scholarly attention from historical archaeologists applying a landscape paradigm. This disparity reflects the discipline's neglect of the household in general rather than any substantive difference between the way humans experience indoor and outdoor space. Indeed, "human activity, cultural expression, political statements, and reflections on worldviews occur within the bounded spaces of structures as well [as the outside world]" (Rotman, 2003:5). When archaeologists do treat interior space, they often do so as part of a larger discourse of private and public space and the "spheres of separation" associated with gender relations. In this treatment, private space is considered feminine, and public masculine. Places that are literally outside the house, such as house yards and exterior kitchens, are usually considered interior space by archaeologists, since much domestic labor and household relations occur in these places.

Barile and Brandon's (2004) volume presents several papers with innovative attention to the intersection of space and gender, particularly in the archaeology of households. An early example of archaeological treatment of private, interior space (although literally "outside" the house) is Leone's (1978) study of Mormon fences. Leone recognizes not only the ecological function of fences that protected agricultural spaces from wind but also the ways that fences around house lots created private spaces within a very public religious community. He summarizes, "In a town where the social structure was based on equal property and close cooperation, and where order was maintained through everybody knowing everybody else's business, fences drew the literal line between closeness and privacy" (Leone, 1978:198). More recently, Baxter (2002:25) describes the efforts Victorian oil workers and their families made to "separate home from work, to distance the smells of the kitchen from smoke-belching boilers, and the strum of the guitar on the porch from the pounding of the drill," by locating their homes a long distance from their work sites, using landforms as visual barriers between public and private space.

Heritage

A significant subfield in the historical archaeology of landscape pertains to memorials. This is the deliberate commemoration of certain highly visible places—at the expense of other places—in the

interest of the production of heritage. The term "heritage" is usually reserved for the conscious reproduction of public memory through the commemoration of historically critical events in the national identity of Americans since the late nineteenth century (Lowenthal, 1998; Shackel, 2000:177); it is a uniquely modern, nationalistic phenomenon. Heritage attends to official memorials and official histories, and by implication, to the privileging of certain histories over those of less powerful social groups. The scale at which a place is commemorated reflects a social group's structural power. However, the commemoration of special places associated with culturally significant events is not limited to "official memory" (Shackel 2003). Historical archaeology is giving increasing attention to the memorials of subordinate groups (Brown, 2001; Dubel, 2001; Horning, 2001; Whitley et al., 1999).

Most historical archaeology concerned with heritage and memorials has focused on national memorials or sites that played a role in some critical national event, especially an armed conflict (Baker, 2000; Dubel, 2001; Ireland, 2003; McGirr, 2003; Saunders, 2001; Shackel, 2001a, 2004). As Brown (2001:103) observes, "as a military struggle ends, the war of words and meanings begins." These are contested landscapes, and archaeologists are understandably concerned with the misuse of their work as "proving" what they consider a single narrative in a contested history. Construction of a memorial is never a politically neutral event. "One of the most effective ways of monopolizing the telling of history is to establish permanent or 'official' memorials at key historical sites" since "such memorials usually serve the interests of some living individuals or factions at the expense of others" (Novak and Kopp, 2003:102).

The discourse of heritage articulates with archaeology for two reasons. First, academic interest in the archaeology of history (as opposed to prehistory, which is more widely identified with an ethnographic "other") is intrinsically linked to colonialism and modern political interests; it is the archaeology of "us" (Ireland, 2003:62–63). Second, the conflict over interpretation of contested places is essentially a conflict over the meaning and the use of material culture. This contested material culture may be the artifacts interpreted at sites, the physical environment of sites, or memorials themselves, along with the interpretation provided for visitors' consumption. Historical archaeologists often struggle with this situation and search for ways of mitigating the privileging effect of memorials. Leone (1978:193) summarizes, "History may be the commonly agreed-on lie but, for that common agreement to be sustained and realized in individuals, they must see it for themselves." The physical immediacy and seeming neutrality of artifacts can be dangerous, especially when presented in a museum case. As Leone suggests, context is critical to combating the misuse of historical archaeological data for political ends, as is the fair presentation of unflattering information and alternate narratives of historical events. Heritage archaeology is primarily concerned with unpacking the multiple meanings of memorials and presenting the context from which places draw their power. Heritage archaeology draws attention to the ways that memorials legitimize particular interpretation of the past and encourage the forgetting of competing interpretations (Shackel, 2001a); therefore, heritage is always in some way about power.

Heritage archaeology is also concerned with the memorialization behaviors—ceremonies, commemorations, and interpretation—that occur at significant places (Schofield and Johnson, 2006). As such, the archaeology of heritage suggests a fourth line of evidence to historical archaeology. In addition to artifacts, texts, and oral history, it is essential that archaeologists who study memorials draw on the ongoing behaviors connected to sites. This evidence may take the form of stories (both formal and "vernacular") told at the site, visitation, and other forms of commemoration. Shackel and Palus (2006) talk about "remembering industrial landscapes" and the fact that histories of the working class are often downplayed or omitted in the "official" memories of these places. Monuments may also be "sites of consumption" (Blake, 2004:242), where the unique behavior of tourism offers visitors the opportunity to consume a piece of localized and objectified history. This form of place consumption may not be unique among landscapes (Basso, 1996) but certainly represents a departure from the "inside meaning" of places, as it is deliberately oriented toward outsiders. Place consumption brings outsiders in through the creation of nostalgia for a time or cultural setting that may never have actually existed.

Place and Identity

With the emergence of inherent approaches to landscape archaeology, archaeologists have turned (along with geographers and anthropologists) their attention to the ways that space, and especially culturally significant places, figure in the formation and reproduction of identity. At its most basic level, space can be correlated with identity in terms of territory, the bounded space in which a given group resides or which the group identifies as "theirs." Individual places also hold great power as landmarks of key events in a group's identity formation. The built environment may reflect the ways that people strategically modify their surroundings to communicate their role in society or modify the way they are perceived or remembered.

Kealhofer (1999) provides a compelling example of the archaeology of identity and place in her study of constructed landscapes in colonial Virginia. Early settlers, intent on creating new lives for themselves, consciously transformed their new environments in order to authenticate their new identities (Kealhofer, 1999:58; see also Winer, 2001). Kealhofer's data illustrate the multiple scales at which landscape is constituted and nested: spatial (garden and tobacco plantations), material (built, planted, and cleared places), and social (household, plantation, and community). These varying scales of landscape are linked to scales of identity at the level of individual, family, and community. The construction of small-scale landscapes, such as gardens, allowed colonists to make physical their conceived landscape (that of the triumph of ordered plantings over wilderness) before it could be constituted on the larger regional scale.

Case Study in Landscape, Identity, Power, and Memory: The Internment Eventscape

As these themes illustrate, historical archaeology has become increasingly concerned with the political struggle over identity and history in stratified societies. Landscape is a powerful tool in this line of inquiry. Landscape provides archaeologists a lens through which to examine the ways that people use their environments as tools of self-definition and a means to legitimize and naturalize that identity. The following case study illustrates these issues as a part of a special kind of archaeological landscape that results from people's participation in culturally critical events.

Following the Japanese military attack on Pearl Harbor on December 7, 1941, President Franklin D. Roosevelt responded to anti-Asian hysteria within the United States by issuing Executive Order 9066, designating secure areas along the Pacific Coast from which all "persons of Japanese ancestry" were soon forbidden. A total of 117,000 people, two-thirds of which were U.S. citizens, were interned in relocation centers in desolate areas of the continental interior portion of the United States.

The War Relocation Centers (commonly called "camps" or "internment camps," although "internment" literally refers to the detaining of enemy aliens) were enormous, hastily constructed complexes whose boundaries were demarcated by barbed wire, armed guards, and signs marking restricted areas—internees could be, and were, shot for crossing such boundaries. Former-internees' memories of these places are marked by physical descriptions of the desolation of their location, the barrenness of the camp layouts, the way that dust storms filled their barracks, and the lack of privacy.

Archaeology and Oral History

The archaeology of Japanese American internment during World War II is ideally suited for a landscape approach. Internment was profoundly spatial, involving the "internal exile" of over 100,000 people in desolate areas of the continental interior. The space of the War Relocation Centers, although not specifically designed to create a sense of alienation, nonetheless dramatically communicated the internees' prisoner status. Internees lived in identical, anonymous barracks that were so hastily built that large spaces were left between the boards—allowing dust, cold, noise, and prying eyes into the living quarters. Families were assigned to a single barrack room, and the showers and toilets were located in large, open rooms.

Internees were not, however, entirely powerless over their environment. They borrowed or stole construction materials and fabric to create privacy with room dividers and curtains. Internees organized work details to construct bathroom stalls and Japanese-style tubs (T. Norikane, in Branton, 2004:136), and eventually gardens, walkways, cemeteries, and recreation facilities. All of these physical elements are part of the internment landscape, which includes the War Relocation Centers, the U.S. Department of Justice camps in which Japanese American community leaders were held, and the Assembly Centers to which internees were first evacuated. The temporal boundaries of the internment landscape are not limited to the years (1942–1946) in which Japanese Americans were incarcerated. The landscape of internment continues to have meaning to Japanese Americans today. After the camps were closed, and internees had restarted their lives, they maintained a quiet attachment to the places of internment, visiting their former camps, collecting artifacts, and signaling this attachment by asking Japanese American strangers upon meeting, "What camp were you in?"

Power and Privacy

Although the War Relocation Centers were largely demolished upon closing, archaeological and oral historical investigations (Branton, 2004; Burton, 1996; Burton et al., 2002) have begun to reveal data about the built environment of internment sites and the ongoing role that landscape has played in internment resistance. Contrary to the official history of internment, archaeology and oral history indicate that Japanese Americans did not (and do not) go along compliantly with their incarceration.

Ceramics recovered from the Manzanar War Relocation Center landfill suggest that female internees may have served tea and other traditional foods in their barracks, despite rules forbidding cooking. Along with the distinctive vitreous, white-bodied earthenware (hotelware) dishes issued by the U.S. Quartermaster Corps (and manufactured in the United States) for use in the camp mess halls, the Manzanar landfill contained numerous oriental porcelain tablewares in such traditional Japanese forms as tea and rice bowls, sauce dishes, and sake cups and bottles (non–U.S. made) (Branton, 2004; Majewski, 1996).

Oral and documentary data confirm that internees held occasional parties in their barracks and valued the ability to invite friends "home" for snacks. This food sharing may have been a strategy for resisting the negative effects of mess-hall dining on the family. Manzanar's internees were required to take their meals in the camp's mess halls, with the result that families no longer shared meals together, and children spent markedly less time with their parents and grandparents than they had prior to relocation. Like the construction of barriers and curtains, providing even small meals in the barracks was a strident attempt to create a sense of normalcy for families and friends. For interned women, this creation of "home spaces" within the very public barracks setting represented a reaffirmation of their identities as traditional homemakers and challenged their imposed identities as prisoners.

Historians and social scientists who have studied relocation have long dismissed the idea of Japanese American resistance with the term *shikataganai*, a Japanese phrase meaning "it cannot be helped." However, some internees did resist, especially through this kind of everyday resistance (Scott, 1985). Internees stole food and building materials, smuggled such contraband as cameras and alcohol into the camps, and engaged in antiadministration and antigovernment humor.

The most overt form of internee resistance occurred when the U.S. government began drafting young Japanese American men from inside the camps. For 315 of these young men, who became known as the Resisters of Conscience, the irony of being called upon to fulfill the duties of citizenship while being denied its privileges was too great; they refused to report for their physical exams. Because they were called on as individuals, many saw their draft notices as their first opportunity to directly challenge the violation of their civil rights. They considered their actions patriotic and hoped that their actions would bring attention to the unconstitutional incarceration of their families. As Resister of Conscience, Joe Norikane (in Branton, 2004:121) explained, "if you're going to fight for your country and your homes, I ain't going to go die for my home in the concentration camp." They were labeled draft

dodgers, and all were imprisoned and fined for Selective Service violations.

The resisters' decision to protest was extremely unpopular in the atmosphere of "200% citizenship" in the camps. The post-war Japanese American community invested its identity in its perseverance under mistreatment and especially in the extraordinary record of the all–Japanese American 442nd Regimental Combat Team, the most decorated unit of its size in World War II. In this setting, the Resisters of Conscience were made to feel ashamed of the stand that they took against internment, and many never spoke of their wartime experiences until very recently.

The Gordon Hirabayashi Recreation Site

Again, the built environment was instrumental in uncovering evidence of internment resistance. Following the Redress movement (in which the U.S. government apologized and paid reparations to former internees), Japanese Americans began actively working toward preserving and formally memorializing internment sites. Today, nearly all of the War Relocation Center sites have some kind of formal interpretation or historical designation. The struggle for these memorials has also been the struggle over *which* internment history will be preserved. At most sites, the narrative of the Resisters of Conscience has been suppressed.

In 1999, the Coronado National Forest dedicated a unique internment memorial, the Gordon Hirabayashi Recreation Site. The memorial is located at the site of the former Catalina Federal Honor Camp, a prison work camp in the mountains of southern Arizona that housed 45 Resisters of Conscience and Gordon Hirabayashi, one of only three Japanese Americans to legally challenge relocation itself. The Honor Camp resisters, who call themselves "Tucsonians," have retained an attachment to this place and have held reunions since the 1940s. Several of the Honor Camp resisters attended the dedication and participated in an oral historical study of their wartime experiences and relationships with the camp. As a result, the history of internment that is presented at this site includes the Resisters of Conscience.

That the Honor Camp exists as place only in the context of a bounded social group should be evident to any outsider who visits it. The sense of this place is not apparent in the broken concrete slabs that remain at the site but rather in the way that Japanese Americans identify, imagine, remember, and contest this place as associated with the experience of internment and resistance and the multiple ways it is metaphorically tied to their identity as an ethnicity and as a community of Americans (after Feld and Basso, 1996:11). Part of the significance of this place is the way that it facilitates storytelling, particularly instructional storytelling about appropriate American behavior, intended to "transform and further empower" (Low, 1994) future generations.

Many of the "Tucsonians" told stories at and about the Honor Camp that they had never told before, with the intention of "correcting" the official history of internment. Without exception, the Tucsonians related their experiences not to being Japanese American, but to being American and to standing up for their Constitutional rights. They also talked about the community of the Tucsonians, how they identified not only as Resisters of Conscience but also as a community tied to the Honor Camp. Many referenced how important they felt it was to finally tell younger generations of Japanese Americans about the unique stand that they made for their civil rights. All expressed a feeling that all Americans should be prepared to make personal sacrifices like theirs in order to uphold the Constitution, since "the constitution is just a piece of paper. It's the people who got to protect that" (Taguma, in Branton, 2004:123).

The naming of the Honor Camp site as the Gordon Hirabayashi Recreation Site reflects the fact that part of the power of this place is derived from its association with a particular person. Hirabayashi was not a Resister of Conscience (he did not resist the draft). Rather than assembling with his neighbors for removal to the relocation centers, Hirabayashi presented himself to the U.S. Federal Bureau of Investigation with a statement explaining that he could not participate in relocation because it was unconstitutional. He was sentenced to serve four months in prison. Forty years after his conviction, Hirabayashi's case was reopened based on previously suppressed evidence and his conviction overturned. The case prompted a federal commission to rule that the internment of Japanese Americans during World War II

was motivated by racial prejudice, wartime hysteria, and failed political leadership. Many Japanese American visitors to the site, including the Resisters of Conscience and other Conscientious Objectors who served time there, identify the importance of the place with him, even though he spent only a few months there.

The fact that most Japanese Americans have not spent time at the Honor Camp does not diminish its importance to the broader Japanese American community. The meaning of the place reflects Japanese Americans' self-definition (Greider and Garkovich, 1994:10). As examples of how Japanese Americans have acted in defense of civil rights, the Resisters of Conscience and Gordon Hirabayashi are tied to Japanese American identity as *Americans*. That a place still exists where these individuals came together and where their story has been recognized and told to a new audience is the fulfillment of a quest to be recognized as legitimate Americans that began with internment. The Honor Camp is a memorial that actively and overtly communicates. It has an agenda to inform its visitors, both Japanese American and otherwise, about a hidden history. The Honor Camp exemplifies Shackel's (2001a:666) contention that visible and visited places like national parks and forests make ideal "arenas for negotiating meanings of the past."

The Tucsonians who participated in the Gordon Hirabayashi Recreation Site dedication and subsequent oral history project consider the site a place to educate people, especially young Japanese Americans, about the "real" history of internment. Their goals take two forms: first, they want their stories told, their counter-memories of resistance included alongside the officially sanctioned stories of the veterans. The resisters' second goal is to educate all visitors to the site about the constitutional issues they challenged through their resistance. The Tucsonians hope that, by using the site to convey the story of Gordon Hirabayashi and the Resisters of Conscience to a new audience, they may shape future generations in accordance with their values of civil rights. They are actively involved in place-making through the commemoration of the Honor Camp and communicating the meaning of the place in verbal and written stories (Basso, 1996; Tuan, 1991).

The persistence of places like the Gordon Hirabayashi Recreation Site suggests a unique kind of landscape. An *eventscape* (after Stoffle et al., 2000:9) consists of a network of thematically connected places associated with a social group's participation in a culturally critical, persistent event—often associated with the emergence of an ethnic or community identity. Eventscape encompasses not only locations within a landscape but also the behaviors such as commemoration, storytelling, visitation, and instruction in appropriate behavior that take place at those sites as part of the cultural transmission of information about the event across generations. The internment eventscape is instrumental in incorporating new generations of Japanese Americans into the internment story. The Gordon Hirabayashi Recreation Site is a landmark of resistance, not only because of the Resisters of Conscience who were imprisoned there but also because of its function as a mouthpiece for the lost histories that are now challenging the master narrative of relocation. It is at this particular place that Resisters of Conscience are finally able to share their stories of the contested past and gain equal standing with Japanese American veterans (Branton, 2004). It has been appropriated (Basso, 1996:143), not only by its former prisoners and their families but also by the Japanese American community, as a place that expresses their identity as Americans, an identity that they have negotiated and sought recognition of since December 7, 1941.

Future Directions

Landscape has been a part of historical archaeology since its garden archaeology and site-reconstruction beginnings. As increasingly recent and complex history falls under the umbrella of historical archaeology, archaeologists have tremendous opportunities to influence the direction of landscape theory development in archaeology and beyond. Historical events such as post–World War II suburban community development, creation of modern utopian communities such as ecovillages, and memorialization of the Vietnam War and the American Civil Rights movement are excellent data sets for testing assumptions about the role of place and space in stratified, factionalized, power-laden settings.

In order for landscape theory to become more than a theoretical trend, however, historical archaeologists must be more deliberate in their usage of landscape terminology. As noted above, the building blocks of landscape—place, space, power, access, and the use of landscapes—are nebulous concepts that require concrete examples in order to define their edges. The range of human behaviors associated with places is just as slippery. A greater body of deliberate landscape archaeology work is needed. Historical archaeologists must clearly define the boundaries and reference social groups of the landscapes they study, particularly in situations of nested landscapes and multiethnic or otherwise stratified societies. They must also be explicit in the units of observation and analysis they use in landscape studies, rather than lumping all "natural" or "built" elements into a messy but convenient stew they call "landscape." Moreover, the simplistic usage of landscape simply as a scale of analysis must be replaced by a deliberate analysis of the ecological, economic, and social components that make landscape a meaningful analytical tool.

Toward the end of bridging explicit and inherent approaches, it is essential that historical archaeologists test the assumptions underlying landscape theory. That is, do people assign space based on differential power or rank? Are landscape values such as height, proximity to resources, and "order" versus "wildness" universally positive? Do people always attach meaning to places and, if so, does this vary according to the mobility of groups or a group's newness to a setting? Do people who enter a new environment cluster together or spread out? Finally, who builds the built environment? In other words, in a designed landscape such as a company town, who decides where things are built, and is this power shared across multiple factions? Answering these foundational questions about the materiality of social space is critical to making landscape theory useful across archaeology.

Answers may come from simply building a body of archaeological studies of space, but landscape theory may benefit even more from ethnoarchaeological studies of modern built environments. New "master-planned" housing developments, contested monuments, office buildings, artist colonies, and green housing communities are ideal laboratories for testing landscape models and clarifying the assumptions about space, place, and power that underlie them.

As the case study above demonstrates, monuments and memorials are also fertile ground for observing landscapes and landscape behavior unfolding. As lightning rods of identity, "big places" like the Manzanar War Relocation Center, the World Trade Center, the New York African Burial Ground, and the Sand Creek Massacre National Historic Site in Colorado give archaeologists an opportunity to directly observe not only how places become important to people but also the multitude of place behaviors that occur there. At the World Trade Center Memorial, for example, one can study not only memorial creation but also the development of master narrative, commemoration, differential strategic power, pilgrimage, place consumption, and the influence of eventscapes on emerging identities. By applying these landscape models to such recent memorials, historical archaeologists may also achieve the Holy Grail of archaeology, making the study of the past relevant to the present by identifying appropriate ways for preserving and commemorating culturally significant places.

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Historical Archaeology and the Environment: A North American Perspective

Donald L. Hardesty

Introduction

Environment plays an uncertain, variable, and sometimes contradictory role as an explanatory concept in historical archaeology. In this, historical archaeology is not unique. Crumley (1994:2), for example, observes that in the typical introduction to anthropology course or textbook, the environment plays an enormous role in interpreting the early history of human evolution but that "midway through the text or term, the environment no longer figures in the narrative except as a resource to be commoditized." Yet, by the end of the course, Crumley (1994:3) goes on to observe,

> the lecturer or author takes up the single most pressing issue: rapid global environmental change at the hands of the human species. The environment, marginalized in the latter portions of the story of human evolution, becomes again the central problem for the species. To claim an integrative, holistic, and dynamic approach to human environment relations, anthropology must transcend this fundamental contradiction.

The contradiction is reflected in history as well. Social historians typically marginalize the environment as a significant player in interpretation, but environmental historians focus upon environmental issues as a key problem area. That the two approaches can be combined effectively, however, is clearly illustrated in Alan Taylor's (1995) wonderful study of William Cooper's Town. Toward this end, he argues persuasively that "social history is environmental history just as environmental history must be social history" (Taylor, 1996:16), and, citing Arthur McEvoy and Donald Worster, that "because our environmental crisis and worsening social inequalities are interdependent, neither problem can be alleviated without attention to the other. Sustaining a relationship with the natural depends on a greater equality in the social benefits and costs of its consumption" (Taylor, 1996:16).

As might be expected, historical archaeology, which by definition is not concerned with the early history of the human species and limits itself to the study of the modern world, often marginalizes environment in its explanations of human diversity and change. Environment, however, has not been completely ignored, and this chapter provides some primarily North American examples. Deagan's (1996) excellent overview of environmental studies in historical archaeology shows that practitioners of the discipline typically have approached issues of human–environmental relationships from the perspective of the world systems paradigm and a market economy, especially that driven by the capitalism. Certainly the global scale of historical archaeology is ideally suited for grasping the significant environmental issues of the modern world. Several years ago, an international conference "Ecology and Empire: the Environmental History of Settler Societies," for example, pointed to issues in the global ecology of the modern world as an interdisciplinary context within which a more environmentally aware historical archaeology can emerge (Griffiths and Robin, 1998). Conferees discussed such topics as deforestation, fire, ecological science, commerce and commoditization, and specific aspects of the colonial environmental

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experience in Australia and South Africa. Archaeological data from historical sites can be brought to bear on all of these issues, as exemplified by the emergence of a global-change archaeology within the last few years (e.g., Crumley and Hornborg, 2006; Hardesty, 2007; McIntosh et al., 2000; Redman et al., 2004; Rockman and Steele, 2003).

Urban archaeology is another possible focus of an historical archaeology that is informed by contemporary environmental issues and problems. Deagan (1996:370–371), for example, points to the long-term study of New England's urban landscapes conducted by Stephen Mrozowski, Mary Beaudry, and their colleagues:

> Combined analyses of pollen, plant macrofossils, archaeological features, and archival data from several New England settlements resulted in a characterization of emergent and established urban landscapes. Early urban centers contained residential household gardens characterized by dry, disturbed soils, weedy plant species, exotic weeds, and edible plants within densely settled areas. As cities grew and land use became more intensive, residential areas were segregated in suburbs with households and yards not used for food gardens and other economic activities.

Grimm et al. (2000) offer a similar perspective on a modern urban place in the American Southwest. How to most effectively integrate environment into the research agenda of historical archaeology, however, is a problem. The concept of environment means very different things within the context of natural science, social science, and humanistic structures of inquiry. As a social science, for example, historical archaeology pursues "social constructions" of nature (e.g., Hannigan, 1995). As humanistic inquiry, however, historical archaeology operates within a structure of inquiry intended to write histories of the "transformation of nature into culture," interpreting environmental meaning within a social and cultural context. In a recent paper, Mrozowski (2006) demonstrates how a biologically oriented historical archaeology can contribute to a fuller understanding of the biological dimensions of cultural processes such as colonization, urbanization, and industrialization. In the remainder of this chapter, I develop these ideas further and explore the usefulness of several alternative structures of environmental inquiry to historical archaeology.

Processual Paradigms

One general approach to the use of environment to explain variability and change in human behavior is explicitly scientific and interprets interplay between the human organism and its environment with general processes. Of these approaches, some are "monistic," assuming that the same processes affect all life forms, including the human organism, and others are "exceptionalist," treating humankind as unique. The most commonly used monistic paradigms are evolutionary ecology and systems ecology. Cultural ecology is the best-known exceptionalist paradigm.

Evolutionary Ecology

The Darwinian principle of natural selection is the cornerstone of evolutionary ecology. Processual models of this type hold in common the idea that human behavior is variable, that some of these variants are better than others at solving environmental problems, and that these adaptive variants are reproduced at the expense of those that are not. They also focus on the decisions that individuals make in selecting or rejecting environmental resources and work within the operational framework of microeconomics (see, for example, Smith, 1991). Schiffer (1996) observes that there are two approaches to evolutionary ecology in archaeology. One approach attempts to reconstruct the actual behaviors from the archaeological evidence of human activities. Behavioral models of this type might involve, for example, the reconstruction of the varieties of domestic households or local settlements and track differences in their persistence in time and space. The other approach, often called evolutionary archaeology (e.g., Leonard and Reed, 1993; O'Brien, 1996; Teltser, 1995), eschews reconstructing behavior in favor of what can be directly observed in the archaeological record, the artifacts themselves and their varieties as material expressions of an "extended phenotype" upon which selection operates. Here, evolution is simply the "differential persistence of discrete variants" (Schiffer, 1996:646).

Optimal-foraging models are the most commonly used ones in evolutionary ecology, but the

paradigm also includes life history, group formation, and community structure models (e.g., Smith, 1991:34). Smith (1991:41) describes optimal-foraging theory as "a general framework for explaining animal foraging behavior as a product of evolutionary design." It employs the same logical structure used in other optimization models, such as those used in microeconomics and in decision theory. The models portray actors making choices according to a strategy that optimizes some currency (e.g., calories or money) within a set of constraints. Optimal-foraging models attempt to identify general decision-making strategies that are applicable not only cross-culturally but also across species. Hardesty (1985) uses an optimal-foraging model to help understand the environmental decisions and movements of miners in the American West. The miners are conceptualized as "industrial foragers" who move from ore patch to ore patch according to the predictions of Charnov's marginal value theorem. Charnov's theorem states that "the optimal predator should stay in each patch until its rate of intake (the marginal value) drops to a level equal to the average of intake for the habitat" (Krebs and Davies, 1978:43). In Hardesty's application, ore patches on the American mining frontier are viewed as commodities with values that change within a global marketplace and with harvesting costs that vary with available technologies of transportation (e.g., railroads) and extraction (e.g., mechanized open pit mining). The model is capable of predicting patterns of ore patch abandonment and recolonization that could be tested with archaeological and documentary data.

For our purposes, life history models can be understood best as "archaeological ecobiographies" of individuals or small social groups such as families or domestic households (Hardesty and Fowler, 2001). They portray the historical trajectories of environmental movements and choices made by individuals or households during their lifetime. King (1993), for example, combines documentary, archaeological, and oral historical data in writing an ecobiography of an Alaskan miner during the early part of the twentieth century. Group formation and settlement pattern models focus upon environmental decision-making that affects the location and organization of settlements. Eric Smith's (1991) study of the settlement location decisions of contemporary Inujjuamiut foragers of Arctic Canada is a good example of the approach.

Community structure models, finally, are scenarios of environmental decision-making taking place within the social and cultural context of larger groups such as the community. Krannich et al. (1996:852), for example, use the concept of the "water user community" to understand the social impacts of severe and sustained drought in the Colorado River Basin:

> Water user communities are social networks, each of which is comprised of people who share a common, but limited, water resource. The living in and dependent upon an irrigation district that draws water from the Colorado River, for example, may define one type of community. Another community type may involve a group of people who are dependent upon the pumping of groundwater that is affected by a Basin-wide drought.

The concept of the human ecological niche (Hardesty, 1975, 1977) is used to analyze and interpret how different groups within a water user community, such as those defined by class, ethnicity, occupation, and gender, are impacted by long-term drought in the Colorado River Basin. Krannich et al. (1996:852) note that "[i]n this case, the niche is defined by a distinctive strategy for using a limited water supply; the strategy includes not only a lifestyle but also an underlying complex of ideologies, attitudes, values and beliefs about water." They conclude that "the social impacts of severe sustained drought in the Colorado River Basin, then, should be reflected by changes in the niche structure and other characteristics of the water user community" (Krannich et al. 1996:863). Schaffer and Schaffer (1984), for example, document changes in the social networks defining communities in the Ogallala Aquifer area of Texas that include migration, occupational shifts, social upheavals, group conflict, and disintegration.

Systems Ecology

Another monistic paradigm is systems ecology, which focuses not upon the processes that connect environment to individual species or populations but upon the processes operating at higher levels of biological organization such as the community and the ecosystem. Like evolutionary ecology, systems ecology assumes that all life forms, including

humankind, are affected by the same general processes. The cybernetic model is the hallmark of the systems ecology paradigm. Roy Rappaport's (1967) classic study of the Tsembaga Maring in highland New Guinea is the best-known application of the cybernetic model to human populations, but it has been widely used since then in anthropology and archaeology (e.g., Moran, 1990).

The cybernetic model, however, which presupposes that species live in balanced, integrated communities with well-defined boundaries in time and space, does not now appear to be a good representation of reality. Ecologists have found that self-regulating mechanisms that operate at the level of the ecosystem or community are insignificant. In general, "the principle of balance has been replaced with the principle of gradation—a continuum of degrees of human disturbance" (Soule 1995:143). Still, as discussed above in the "community" approach to evolutionary ecology, the concept of ecosystem or community is useful in understanding the interactions taking place among species or populations living in the same environment, whether that environment be a small pond, a mountain valley, or a global world-system. Landon (1995:9–10) argues for its use in historical archaeology, noting that the concept is capable of taking into account "decision-making individuals operating in a cultural and historical context" and that Hastorf (1990:132–134) sees the concept "as especially valuable for regional-scale, long-term analyses that open up the system to include the reflective actions of humans, and consider soil, climate, and the environment, without privileging the environment as the major instigator of change." The addition of a historical dimension to the concept of ecosystem, the removal of system-wide processes operating above the level of individuals, and a focus on landscapes as the material expression of ecosystem histories are, in fact, the key components of the historical ecology approach to be discussed below.

Cultural Ecology

Culture as the unique human means of adaptation to environmental constraints and opportunities is the focus of cultural ecology, a widely used environmental paradigm developed by the late Julian Steward and his intellectual descendants (e.g., Netting, 1993; Steward, 1955). The focus upon culture as an adaptive strategy for environmental problem-solving by human populations makes it distinct from competing monistic paradigms such as evolutionary ecology and systems ecology. Cultural ecology has been by far the most commonly used approach to environmental analysis in historical archaeology. Miller (1984, 1988), for example, uses the concept of cultural adaptation in explaining the evolution of subsistence strategies in the Chesapeake Bay region during the seventeenth and eighteenth centuries. The foodways of the first colonists were highly seasonal, diverse, and dependent upon wild animals and plants, a strategy that minimized risks in a new and unfamiliar environment. Later generations of colonists, however, shifted to a subsistence strategy that was less seasonal, less diverse, and more dependent upon domestic animals. Miller found that the Chesapeake Bay subsistence pattern had diverged significantly from its English historical antecedent by the early eighteenth century.

In practice, cultural ecology is a method of analysis intended to identify specific features in culture and in the environment that engaged in dialectical interplay. Those cultural features that did so formed a "culture core," which typically included those features that are "most closely related to subsistence activities and economic arrangements" (Steward, 1955:37). The culture core should reoccur in other places with the same environmental features. Steward incorporated environment into his theory of multilinear cultural evolution, holding environment constant and conducting comparative studies of cultural patterns. Cultural ecology explains the origin of cultural traits/patterns by showing that they occur cross-culturally in the same environment and that the occurrences are not historically connected. This approach, however, may not necessarily show that the relationship is causal (Vayda and Rappaport, 1968:483–487). Brumfiel (1992) further challenged cultural ecology as an explanatory paradigm in archaeology by arguing that cultures do not adapt. What adapts are "culturally based behavioral systems," in turn the "composite outcomes of negotiations between positioned social agents pursuing their goals under both ecological and

social constraints" (Brumfiel, 1992:551). She also objected to the use of whole populations as the unit of ecological analysis because it "obscure[s] the visibility of gender, class, and faction" (Brumfiel 1992:551). Toward this end, the late Robert Netting greatly refined the cultural ecology paradigm with his recent studies of the "smallholder household" as a type of culture core with cross-cultural and historical validity (Netting, 1993). The smallholder household is conceptualized as a culturally based behavioral strategy of adaptation organized around a small-scale social group. Likewise, Wilk's (1991) study of the Kekchi Maya household explores the sometimes contradictory roles of history and adaptation in household formation and evolution. Hardesty (1992) takes a similar approach to the comparative study of miner's households, combining archaeological, documentary, and ethnographic data to do so. In addition, the concept of cross-cultural types, a key concept in cultural ecology, may be useful in "tracking" the evolutionary trajectories of ecosystems in industrial cultures. Industrialization as an historical process transforms the landscape along a sequential series of "ecoindustrial types." Each type can be conceptualized as a distinctive set of ecological relations, including a system of meaning, power relations, social relations, relations of production and exchange, environmental opportunities, and constraints.

Historical Ecology

Most of us would agree that "archaeology is first and foremost an historical discipline, both historical science and humanistic history" (Hardesty and Fowler, 2001:78). The use of historical analogs in environmental studies, however, has not been forthcoming until quite recently. Some physical scientists, for example, reject historical analogs outright, arguing that unique "novel circumstances" such as twentieth-century chemicals or population explosions render historical analogs irrelevant. At the same time, historical analogs are becoming more and more acceptable as the cornerstone of environmental studies. Fire ecologist Stephen J. Pyne's (1995) fascinating book *World Fire: The Culture of Fire on Earth*, for example, takes an explicitly historical approach in understanding the role of fire in the development of regional biomes. Documenting the historical context of human–environmental interactions, therefore, would seem to be a central concern. The historical context of human–environmental interactions consists mostly of historical events (e.g., floods, fires, volcanic eruptions, introduction of exotic biota) and historical cycles (e.g., long-term regional and global climatic cycles, economic cycles). Such environmental histories may be coarse grained or fine grained. Coarse-grained histories are written at large time and space scales such as regions (e.g., the use of the concept of region in Crumley, 1987, 1994); fine-grained histories are written at small time and space scales such as the individual or household or local group.

As developed by Carole Crumley (1987, 1994, 2001) and others, historical ecology is an "actor-based" approach that focuses on the decisions and actions of "positioned social agents," that uses "historical analogs" to interpret human–environmental interplay, and that reads "landscapes" as the cumulative material expression of the historical trajectories. Historical ecologists use two types of historical analogs to explain environmental change. Nature analogs consider only acts of nature, comparing, for example, the global climate effects of large-scale volcanic eruptions like Krakatoa (A.D. 1883) and El Cichon (A.D. 1982) without reference to humankind. Dialectical human–nature analogs, on the other hand, consider the dialectical interaction between human acts and acts of nature. Volcanic eruptions such as Arizona's Sunset Crater (A.D. 1064), for example, induces a period of crop failures, which is offset by storage or social alliances in some areas but not in others (e.g., Sullivan and Downum, 1991). Another example is the environmental impact of introducing exotic plant and animal species into an indigenous biota such as North America (e.g., Deagan, 1996) or the Hawaiian Islands (e.g., Kirch and Hunt, 1997; Kirch and Sahlins, 1992). In this regard, Kirch (1997) makes the convincing argument that islands are natural laboratories for controlled comparative studies of global environmental change. Yet another example is the social and biological stress on the Jamestown (Virginia) colony brought about by a drought episode from 1607 to 1612 (Blanton, 2000).

The dialectical human–nature model of historical analogs uses the concept of landscape to study environmental changes over a long time span and tracks such changes with an interdisciplinary approach (e.g., Cassell, 2005; Lozny, 2006; Metheny, 2006; Rockman and Steele, 2003). Landscape archaeology in this sense combines physical data (e.g., modern climate, soils), documentary data (e.g., agricultural history, fire history), archaeological data (e.g., plant and animal remains), and ethnographic data (e.g., the observed use of fire by farmers). Teasing out the relationship between environmental history and landscape, however, requires careful attention to the use of historically sensitive concepts with a landscape expression that can be explored through the archaeological record. They include, for example, measures of environmental variability and diversity in time and space such as patchiness and grain, persistence, and predictability (Winterhalder, 1994). Historical ecology also requires recognition that environmental events and processes operate on multiple time and space scales, resulting in shifting boundaries and organizational structures (Crumley, 1987, 1994).

Ecological Marxism

Another historical paradigm is Marxism, which has played an important role in the thinking of many historical archaeologists (e.g., Leone et al., 1987; McGuire, 2002; Orser, 1988). Marxist scholars, however, generally have been skeptical of ecological issues and explanatory principles. Traditionally, Marxist scholars ignored issues of ecological sustainability, in some cases taking the position that the political ecology of the 1960s was nothing more than yet another ideological "mask" used by the dominant classes to obscure their self-interests. The blame placed on overpopulation as a cause of environmental problems, for example, focused on the Third World and ignored the overconsumption of the industrialized nations. The "greening" of Marxism in recent years has involved rethinking "infrastructure" to include the forces of nature or the "conditions" of production as well as the forces and relations of production (Benton, 1996). Contradictions between the forces and relations of production and the conditions of production are now recognized. The creation of an ecological Marxism has involved several changes. First of all, the key concepts of historical materialism, especially the capitalist mode of production, have been modified to explain ecological degradation and ecocrises (Benton, 1996:104). Several years ago, for example, Gunnar Skirbekk (1988) argued that the ecological crisis of the 1970s also could be explained as a contradiction of capitalism. The contradiction, however, contained within its infrastructure, included not only oppositions between the forces and relations of production, the traditional Marxist interpretation, but also oppositions between the forces of production and what he called the "conditions" of production or the forces of nature. From this view, the social transformation that necessarily ensues involves "a reconciliation not just between forces and relations of production, but also between these and the natural conditions of production or 'forces of nature'" (Benton, 1996:105). Marxist scholars continue to argue that this transformation must be a socialistic mode of production organized around central planning but now consider the possibility that this in itself will not guarantee an ecologically sound infrastructure, as is well evidenced by the ecologically disastrous political systems in the former Soviet Union.

Environmental Humanism

The final structure of environmental inquiry to be considered focuses on the archaeology of "meaning." Historical landscapes provide images of and information about the cognitive world as representations of environmental knowledge and as ideology. The fengshui landscapes associated with ethnic Chinese culture, for example, reflect the principles of geomancy to a greater or lesser degree (Wei, 1992; but see Greenwood, 1993). Renfrew and Zubrow (1994) argue that such cultural representations or systems of meaning can be approached not only archaeologically but also within a scientific structure of inquiry. Historical landscapes also represent ideology, which plays a prominent role in creating the social and political context and uses of knowledge (Leone et al., 1987:282). Most of all,

ideology is politically active and often serves the purposes of social groups or individuals. Thus, Leone (1984:26) comments that

> Ideology takes social relations and makes them appear to be resident in nature or history, which makes them apparently inevitable. So that the way space is divided and described, including the way architecture, alignments, and street plans are made to abide by astronomical rules, or the way gardens, paths, rows of trees, and vistas make a part of the earth's surface appear to be trained and under the management of individuals or classes with certain ability or learning, is ideology.

Such a "critical" approach to environmental meaning, however, has not gone without its detractors. Consider, for example, Soule's (1995) critique of deconstructionism as a structure of environmental inquiry. Soule (1995:137) observes that in recent years, deconstructionism has been widely used by social critics to

> question the premises that sustain the existing social order. And if those premises "priviledge" a particular group, and if that group has not struggled to achieve its status, or if the premises are "false," then it is essential to "deconstruct" these premises—to lay them bare by the dissection of analysis—because the exposure of premises increases the likelihood of change.

Deconstructing conceptions of nature and wilderness have become part of this style of social criticism, up to and including challenging the existence and essential reality of nature and wilderness.

The "myth of constructionism" brings together two levels of meaning from the deconstructionist critique of nature (Soule, 1995:148–155). First of all is the challenge to the premise that nature has an objective physical reality that is independent of the observer. Cultural biases and sensory filters operating on each individual observer distort reality so much that the "truth" of nature, certain knowledge, cannot be obtained. Rather, we have only "constructions" (biased reports or stories or narratives) of nature, not a reality. From this perspective, scientific reports are no more valid, and to be treated the same as, other "stories" about nature, whether they be folktales, sacred texts, or whatever. This is an extreme example of cultural relativity and historicism, denying that any aspect of nature is replicable cross-culturally or historically. Soule (1995:149) notes that

> The social objective of this movement is to demystify and dethrone the "hegemonic dominance" of science and replace it in the public's ranking of authority with a level field that does not privilege any single approach or give it the power to ignore competing representations made from other positions.

Secondly, whatever physical reality nature may have, constructionists claim that it is no longer "natural" but a "human artifact" created by a long history of economic manipulation by indigenous peoples. In response to such claims, Soule points to cross-cultural studies showing that people carrying different systems of cultural meaning do often perceive nature in the same way. Ethnobiologists, for example, have pointed to scientific and folk taxonomic classifications of plants and animals that are essentially the same. Soule also notes that while scientists certainly are biased and that such biases must be taken into account, that does not imply that "science" is. Science, in fact, is a self-correcting system of meaning with methods that not only identify errors but also allow their correction.

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An Update on Zooarchaeology and Historical Archaeology: Progress and Prospects

David B. Landon

Introduction

This chapter reviews the development, practice, and results of zooarchaeological research in historical archaeology. Zooarchaeology, or faunal analysis, is the study of animal bones from archaeological sites. The study of animal bones from sites has become an established subdiscipline in archaeology with a large and growing literature (for overviews, see O'Connor, 2000; Reitz and Wing, 1999). Zooarchaeologists studying faunal collections from the historical period typically use many of the same methods and explore the same issues as zooarchaeologists studying collections from other time periods and locations. As a result, this review is not strictly limited to historical archaeology, but selectively incorporates other zooarchaeological studies. In particular, zooarchaeologists working with historical-period collections have much to gain from a broader reading of studies of Old World collections dominated by domestic animals. At the same time, the purpose is not to encompass the entire field of zooarchaeology, but to look primarily at the study of animal bones from historical-period sites. Thus, this chapter highlights, to the extent possible, aspects of developmental history, methods, and questions that are unique to historical archaeology, with a particular emphasis on research results. The study of animal-bone collections from historical-period sites, referred to here as "historical zooarchaeology," is sufficiently developed to have made some substantive contributions to our understanding of past diet, subsistence practices, and the development and characteristics of past agricultural and food production systems. Despite these accomplishments, the full potential of historical zooarchaeology is far from realized. Recent studies have established innovative directions for the future, creating opportunities for significant research that makes new contributions to our comprehension of the past.

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The Development of Historical Zooarchaeology

The growth of historical zooarchaeology has been shaped by the broader patterns of development of both zooarchaeology and historical archaeology. Bogan and Robison (1978, 1987) have compiled information on the history and development of zooarchaeology in eastern North America. Jolley (1983) reviewed the state of historical zooarchaeology as of the early 1980s, and Deagan (1996) has incorporated an assessment of many historical-zooarchaeology studies in her broader overview of environmental archaeology in historical archaeology. Together, these authors identify many of the important themes in the development of historical zooarchaeology.

Robison (1987), in his historical overview, recognizes three periods in the development of zooarchaeology in eastern North America: a "Formative"

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phase (1860s–1951), a "Systematization" phase (1951–1969), and an "Integration" phase (1969–present). As he notes, the first researchers who can be considered full-time specialists in North American zooarchaeology—Paul W. Parmalee, Stanley J. Olsen, and John E. Guilday—emerged during the Systematization phase. In addition to analyses of prehistoric collections, all three of these researchers published early studies of historical-period collections (Guilday, 1970; Olsen, 1964a; Parmalee, 1960). The first published study of a North American historical-period faunal collection dates to 1960 (Parmalee, 1960), setting a start date for historical zooarchaeology (Jolley, 1983).

As historical archaeology grew during the 1970s, the number of analyses of animal-bone collections from sites dating to the historical period expanded. Deetz's (1977) classic *In Small Things Forgotten* drew attention to past foodways as one of the "small things forgotten." Historical archaeology's attempts to reconstruct past lifeways helped establish faunal analysis in historical archaeology. Zooarchaeology also benefited from the greater attention to ecological and environmental issues that came with the cultural-ecological emphasis of the New Archaeology. A scientific and cultural-ecological approach came into historical archaeology through people like Stanley South (1977), and influenced some of the 1970s and early 1980s studies of historical-period collections. Good examples are found in many of the zooarchaeology reports in the *Conference on Historic Site Archaeology Papers*, which South edited (Honerkamp, 1982; Miller, 1979; Miller and Lewis, 1978; Shapiro, 1979). During this period, historical zooarchaeology also benefited from the general expansion of historical archaeology that came with the rapid growth of cultural resource management studies.

In a very practical sense, historical zooarchaeology typically got done where people with strong interests in zooarchaeology worked with people digging historical-period sites. Charles Cleland at the Michigan State University and the combination of Charles Fairbanks and Elizabeth Wing at the University of Florida made great contributions to historical zooarchaeology, not just through their own work, but also through teaching students. Cleland's early research in historical zooarchaeology (Cleland, 1970) established directions for some of Terry Martin's and Henry Miller's subsequent work (Martin, 1986, 1990, 1991a, 1991b; Miller, 1979, 1984, 1988; Miller and Lewis, 1978). The program at Florida has had an even broader influence on the development of historical zooarchaeology, beginning with a string of student projects (Cumbaa, 1975; Honerkamp, 1982; Otto, 1977, 1984; Reitz, 1979), and continuing to this day through interdisciplinary field projects, which often include a strong environmental archaeology focus.

As the general subfield of zooarchaeology has become better established, the number of full-time zooarchaeologists has continued to grow. Many zooarchaeologists tend to concentrate on a specific time period or region. Some zooarchaeologists with a primarily prehistoric or Old World focus have studied North American historical-period collections (Crabtree, 1984; Crader, 1984a, 1989, 1990; Greenfield, 1992; Lyman, 1977, 1979, 1987a). These studies continue to make real contributions to historical zooarchaeology, especially when they draw in new perspectives and approaches.

The 1980s saw the first zooarchaeologists who concentrated a significant portion of their work on historical-period collections, including Elizabeth Reitz, Terrance Martin, and Joanne Bowen. Bowen helped to establish historical zooarchaeology by publishing an early piece that compared documentary and zooarchaeological evidence for animal husbandry at Mott Farm (Bowen, 1975). Part of the importance of this piece is that it was reprinted in Robert Schuyler's historical-archaeology reader (Schuyler, 1978), and thus has a high visibility, particularly among students. Bowen has studied collections from historical-period sites in New England (Bowen, 1982, 1992, 1998; Brown and Bowen, 1998), and as director of the Zooarchaeology Laboratory at Colonial Williamsburg has studied numerous collections from the Chesapeake. Her historical-anthropological work on seasonality and agricultural practices (Bowen, 1988, 1990) has advanced the field by developing models for interpreting collections that differ markedly from seasonality models employed by prehistoric zooarchaeologists. Bowen's seasonality work is complemented by Miller's zooarchaeological analyses (Miller,

1984, 1988) and Landon's research on seasonal slaughter practices (Landon, 1993, 2008).

Terrance Martin, based at the Illinois State Museum (where Parmalee helped launch the zooarchaeology program), has studied numerous collections from throughout the Midwest that date to the historical period (Branstner and Martin, 1987; Martin, 1986, 1987, 1990, 1991b). Of particular importance are Martin's analyses of animal-bone collections from French Colonial sites in the Midwest. These studies have greatly expanded our understanding of French subsistence practices and the patterns of interaction between French colonists and Native Americans (Martin, 1986, 1991a, 1991b).

Elizabeth Reitz of the Museum of Natural History at the University of Georgia has done more than any other individual to advance the subfield of historical zooarchaeology. Reitz has studied collections from throughout the Southeast and has amassed a currently unmatched body of work in historical zooarchaeology (a partial sample of her contributions includes Reitz, 1986a, 1986b, 1987, 1991, 1994a, 1994b; Reitz and Honerkamp, 1983; Reitz and Ruff, 1994; Reitz and Scarry, 1985; Reitz, Scott, and Moore, 1987; Reitz and Wing, 1999; Reitz and Zierden, 1991; and Reitz et al., 1985, 1996). One significant aspect of Reitz's work is that she employs a wide range of approaches. Her collaborative Society for Historical Archaeology volume with Scarry worked at integrating faunal and botanical evidence with the historical and archaeological record in a synthetic fashion (Reitz and Scarry, 1985). She has also published many multisite comparative analyses (Reitz, 1986a, 1987; Reitz and Zierden, 1991; Reitz et al., 1985), and one of few overview articles assessing accomplishments of historical zooarchaeology (Reitz, 1987). Reitz's work often includes experimentation with new analytical approaches (e.g., Reitz and Ruff, 1994). In addition to her substantive contributions to our understanding of the past, Reitz's work has established a standard and direction for future studies.

Two additional points close the discussion of the development of historical zooarchaeology. Deagan (1996:363) has noted that studies of zooarchaeological and other biological data from historical-period sites are most successful when they employ interpretive models developed for historical archaeology, rather than simply borrowed from prehistoric archaeology. As she states, "one basic principle is that social environment and market variables are often more directly relevant to understanding subsistence strategies than are local environmental variables and their scheduling" (Deagan, 1996:363). The development of these approaches over the last two decades suggests that historical zooarchaeology is beginning to mature and come together.

Finally, despite historical zooarchaeology's maturation, it has not really achieved Robison's final "Integration" phase, where zooarchaeological data are fully integrated into the body of archaeological reports and used as a central part of the archaeological interpretation (Robison, 1987:12). Zooarchaeologists too often receive collections after an excavation is complete and without information necessary for a full analysis (Emslie, 1984). Animal-bone studies are frequently appended to site reports with little real integration or published as separate studies. There are some notable exceptions to this pattern—studies where zooarchaeological data are integrated into a broader archaeological or anthropological interpretation (Ewen, 1991; Otto, 1984; Rothschild, 1990; Shackel, 1996; Walsh et al., 1997; Yentsch, 1994). Yet for an inherently interdisciplinary field like historical zooarchaeology—which draws together historical, anthropological, archaeological, environmental, and other sources of data—the issue of integration remains problematic. The most successful future studies will use some combination of multidisciplinary teams, project directors with an appreciation of the potential of different types of environmental analyses, and zooarchaeologists able to integrate multiple sources of data and apply them to the key interpretive issues in historical archaeology.

Issues in Analysis

The techniques used for identifying and studying animal bones are very similar among sites. In a simple sense, prehistoric and historical-period animal-bone collections differ primarily in the

range of species represented and the types of butchery marks left on the bones. However, as the bones are quantified and interpreted, greater differences begin to emerge between historical zooarchaeology and studies of collections from other time periods. This section provides a brief overview of some issues in the recovery, identification, quantification, and interpretation of animal bones. Methodological questions have been extensively discussed and debated in the broader zooarchaeological literature (examples include Grayson, 1984; Hesse and Wapnish, 1985; Klein and Cruz-Uribe, 1984; Lyman, 1982, 1987b, 1994a; Reitz, Scott, and Moore, 1987). Hence, this review is selective, focusing on analytical issues that are specific to historical zooarchaeology, areas where historical zooarchaeologists have failed to keep up with other zooarchaeologists, and areas where studies of historical-period bone collections have made a distinct contribution.

Taphonomy and Recovery

Zooarchaeologists have focused a great deal of attention on taphonomy, studying how bones get deposited and buried at sites, how they get destroyed, what conditions aid preservation, and how excavation practices pattern collections (Behrensmeyer and Hill, 1980; Binford, 1981; Bonnichsen and Sorg, 1989; Ericson, 1987; Gifford, 1981; Lyman, 1985, 1987b, 1987c, 1993, 1994a; Meadow, 1980; Shaffer, 1992; Shipman, 1981; Wheeler and Jones, 1989:64–78). While much of this research focuses on interpretations of bone collections from the earliest sites, many of the conclusions are equally applicable to historical-period collections, as my own work has shown (Landon, 1992, 1996:33–57). All archaeological collections are, to differing degrees, subject to taphonomic processes.

A collection's taphonomic history influences taxonomic representation, skeletal-part representation, age profiles, and many other aspects of collection patterning. One well-recognized effect is that of density-mediated attrition (Binford, 1981; Lyman, 1984, 1993). Simply put, when bones are subjected to a destructive force—be it carnivore gnawing, weathering, soil compaction, or something else—the densest bones are most likely to survive, while the least dense are the first destroyed. In these circumstances, taxa with fragile bones, skeletal parts that are less dense, and late-fusing epiphyses (growing ends of bones) are disproportionately destroyed. In a collection dominated by domestic animals, different slaughter ages for taxa could contribute to differential destruction, with implications for taxonomic representation. For example, if people usually slaughtered young pigs and older cattle, pigs' bones would be underrepresented relative to cattle bones in assemblages subjected to density-mediated attrition (Landon, 1992:353).

Zooarchaeologists have recognized taphonomic effects for at least 30 years (Uerpmann, 1973:318–319), yet historical zooarchaeologists still often attribute assemblage variation to differences in human behavior without considering the potential effects of recovery methods or taphonomic history. In a review of a large number of zooarchaeological studies of plantation sites, Reitz (1987) concluded that interpretations of socioeconomic variation could not be conclusively supported because of the potential contributions of taphonomic, environmental, archaeological, and other factors to assemblage patterning. Jolley (1983:67) pointed out 20 years ago that "sample size, recovery methods, preservation factors, and modification of the faunal assemblage by natural and cultural factors" are rarely considered in studies of historical-period collections. Some progress has been made (see, for example, Crader, 1990; Rothschild and Balkwill, 1993), but not enough. Given our growing understanding of taphonomic processes, we have reached the point where interpretations of animal-bone assemblages that ignore the effects of taphonomic processes on assemblage patterning must be considered incomplete. This is not to suggest that taphonomy becomes an end in itself, but rather that the effects of taphonomic processes be delimited so that stronger interpretations about past human behavior can be made. This can be accomplished through a careful consideration of excavation practices, depositional context, taxonomic representation, body-part representation, and bone-surface modifications.

Identification and Recording

Laboratory analysis of animal bones can include recording a series of different attributes (Clason, 1972; Grigson, 1978; Klein and Cruz-Uribe, 1984; Reitz, Scott, and Moore, 1987; Reitz and Wing, 1999). At the most basic level, the skeletal part and taxon are identified. This involves the comparison of archaeological specimens with skeletons in comparative collections and published references (Balkwill and Cumbaa, 1992; Gilbert, 1980; Gilbert et al., 1981; Gustafson and Brown, 1979; Hillson, 1992; Olsen, 1964b, 1968; Schmid, 1972). Many of the North American identification atlases are aimed at prehistoric assemblages and European atlases often include more domestic animals (Amorosi, 1989; Hillson, 1992; Prummel, 1987; Schmid, 1972). European researchers have described criteria to distinguish sheep and goat bones, which are very similar (Boessneck, 1970; Payne, 1985; Prummel and Frisch, 1986). Anatomy books such as Sisson and Grossman (1953) can also be useful aids, although no published reference substitutes for an adequate comparative collection.

Driver (1992) has reviewed many of the underlying assumptions in classification and identification and discussed some important problems that are relevant to historical zooarchaeology. One point he makes is that our knowledge of a time period and the presumed distribution of species often leads to identifications that are not, in fact, supportable on the basis of the bones alone. This can include identifying undiagnostic fragments to a species we have identified from other skeletal elements or otherwise assume to be present, and assuming species historically held their present range. As O'Connor (1996:10) has noted, the latter practice might keep us from reinterpreting past animal ranges.

Driver is correct that we must be cautious in identification and more explicit about the criteria used to separate closely related taxa. The problem of sheep and goat distinction in historical-period collections is well known, but there are other distinctions that are equally problematic. Few researchers report on criteria used to distinguish rats (*Rattus rattus* from *R. norvegicus*), pigeons (*Ectopistes migratorius* from *Columba livia*), and domestic dogs from other canids, even though these distinctions are both difficult and frequently made. More explicit identification is not just better research, but could potentially also make a significant contribution to archaeological interpretation. For example, defining clear skeletal criteria to distinguish between wild and domestic turkeys could increase the interpretive value of turkey bones from historical-period sites.

There are a variety of other attributes that can be recorded for each bone specimen, including symmetry (side of the body), fusion state of the epiphyses, and weight. Zooarchaeologists have developed criteria and recording protocols for skeletal part and portion (Gifford and Crader, 1977), weathering (Behrensmeyer, 1978), burning (Crader, 1984b; Shipman et al., 1984), other bone-surface modifications (Fisher, 1995), tooth eruption and wear (Grant, 1982), other means of age and sex determination (Wilson et al., 1982), and bone measurements (von den Driesch, 1976). Several researchers have defined specific criteria for distinguishing different types of butchery marks in historical-period collections (Fig. 1 [from Crader, 1990:Fig. 8]) (also see Graf, 1996; Landon, 1996:58–95; Lyman, 1977; Reitz and Scarry, 1985: 84–86).

There is at present little consistency in analyses of historical-period collections as to what gets recorded and reported. The questions being investigated will, at times, determine the attributes recorded. However, closer attention to skeletal-part representation and butchery marks would seem warranted. The well-established standards for bone measurements (von den Driesch, 1976), tooth eruption and wear (Grant, 1982 [reprinted in Hillson, 1986]), and other age and sex determination criteria (Armitage, 1982; Driver, 1982; Grigson, 1982) also could be beneficially applied in studies of historical-period collections, especially collections dominated by domestic mammal remains. These attributes have a long history of use by European researchers to interpret stock rearing and animal-husbandry practices (Higham and Message, 1969; Uerpmann, 1973), topics worthy of further attention in historical archaeology. Meaningful use of these observations requires a large sample size (Crabtree, 1990:183–184), and their interpretive value will improve as a larger body of descriptive work is generated.

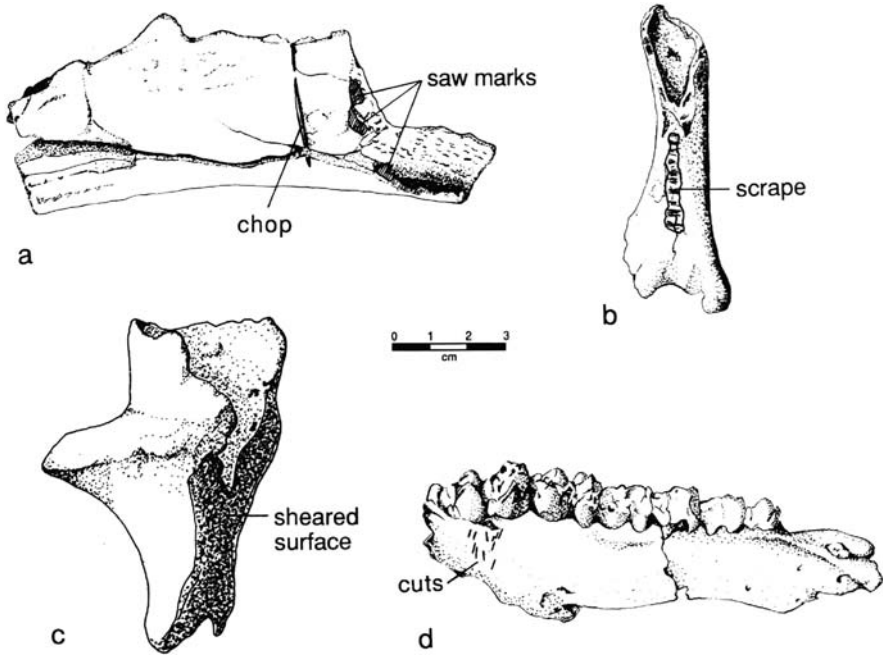

Fig. 1 Butchery mark types identified in the Building "O" faunal assemblage from Monticello: (**a**) cow scapula with chop marks and sawn surfaces; (**b**) pig humerus with scrape marks; (**c**) cow axis vertebra with sheared surface; and (**d**) pig mandible with cuts (from Crader, 1990: Fig. 8)

Quantification

The topic of quantification is central to zooarchaeology and has been extensively discussed (Binford, 1981; Casteel, 1977; Cruz-Uribe, 1988; Fieller and Turner, 1982; Grayson, 1979, 1984; Lyman, 1979, 1987a, 1994b; Watson, 1979; White, 1953; Wing and Brown, 1979). Traditionally, much of the focus on quantification has been directed at estimating taxonomic abundance and interpreting the relative dietary importance of different taxa. As Lyman (1994b:48) has noted, more recent quantitative terms and units entered zooarchaeology with the growth of taphonomic studies and are designed to measure taphonomic effects or identify taphonomic processes. These emphases are not mutually exclusive and it is desirable to take a taphonomic approach to understanding the taxonomic abundance.

Lyman (1994b:37–38) distinguishes three types of quantitative units: (1) observational units, which are empirically based and directly measurable; (2) derived units, which result from mathematical manipulation of fundamental observations; and (3) interpretive units, which are structured to measure some abstract or theoretical concept. Observational and derived units are fairly common in historical zooarchaeology, while interpretive units have received relatively less use. Lyman (1994b:47) also notes that increased understanding of taphonomic processes has changed the status of some quantitative units. For example, early interpretations of the number of identified specimens (NISP) as a straight proxy for taxonomic abundance are now recognized as flawed.

The most common quantification units currently used in historical zooarchaeology are (1) NISP; (2) bone weight, the total weight of some collections of specimens; (3) MNI, the minimum number of individuals necessary to account for some collection of specimens; (4) meat yield, an estimate of the total meat available, calculated by multiplying MNI times a usable meat estimate; and (5) biomass, an estimate of body weight based on an allometric relationship between bone weight and body weight (Reitz, Quitmyer, Hale, Scudder, and Wing, 1987). NISP and bone weight are both observational units. MNI is a derived unit because of the differences among researchers in the criteria used to calculate

this number. Meat yield and biomass are both interpretive units, used as proxies for relative dietary importance of different taxa. The best historical-zooarchaeology reports tend to use several different types of quantitative units simultaneously, often contrasting them with each other.

One underlying problem with meat yield and biomass estimates is that neither fully considers the implications of skeletal-part representation in an assemblage. This is obvious for meat weight estimate derived from MNI, but less so for biomass estimates. The allometric relationship between bone weight and biomass is based on whole individuals (Reitz and Wing, 1999:228), and does not consider the variation in the density of body parts. Strictly speaking, the biomass estimated from 100 g of pig femurs is the same as that from 100 g of pig teeth, even though usable resources from these body parts would not be the same. Lyman (1979) suggests tying skeletal-part representation to specific butchery units, generating meat yield estimates based on butchery-unit representation. Huelsbeck (1991) takes a similar tack, arguing that quantification should be based on the meat unit acquired by the consumer. Though Lyman uses historical-period sources to derive butchery-unit meat weights for domestic animals, his approach has not been widely applied to historical-period collections.

Several studies of historical-period collections have taken slightly different approaches to quantification. Rothschild (1989) measured diversity in faunal assemblage from New York City and Saint Augustine, Florida, to assess the effects of urbanization. Faunal diversity decreased through time in New York, perhaps as a result of environmental change. Faunal assemblages from Saint Augustine were more specialized in the early periods than in later ones. While her interpretive conclusions remain preliminary, she demonstrated that diversity measures could be a useful way to characterize historical-period faunal assemblages.

Breitburg (1991) has worked on assessing the relative value of different measures of taxonomic abundance. Drawing on data from a series of historical-period collections he has studied throughout Tennessee, Breitburg compares taxonomic abundance measured through NISP and MNI to documented numbers of individuals (DNI) derived from historical-period sources. His statistical analysis shows that MNIs generated from the faunal analysis provide, on the whole, a closer match with the historical DNI than do NISP numbers. This study shows one way historical-period documentation can be used, in conjunction with archaeological data, to help resolve methodological questions in zooarchaeology.

As this discussion suggests, most of historical zooarchaeologists' attention to quantification focuses on issues of taxonomic representation and the relative dietary contribution of taxa. While these emphases have merit, the future development of historical zooarchaeology requires additional attention to other quantitative variables. The emphasis on taphonomy has introduced a whole new series of quantitative units in zooarchaeology, few of which have penetrated into historical zooarchaeology. While traditional quantitative units tend to measure taxonomic attributes of collections, more recently developed quantitative units tend to measure "non-taxonomic attributes of faunal remains within a taxonomic category, such as abundances of different skeletal parts or frequencies of butchery marked bones" (Lyman, 1994b).

This type of shift in quantification emphases is necessary for the continued maturation of historical zooarchaeology. There is much to be gained from attempts to more explicitly record, quantify, and interpret butchery mark frequencies (Crader, 1990; Graf, 1996; Landon, 1996; Lyman, 1977; Szuter, 1991). Similarly, more detailed analysis of skeletal-part representation increases the interpretive value of assemblages, especially those dominated by remains of domestic mammals. For example, Reitz and Zierden (1991) used log plots, with specimen counts standardized against anatomical representation in a single animal, to look at cattle body region representation across a series of sites. Another approach to skeletal-part representation is to calculate minimum numbers of elements (MNE) (see, for example, Crader, 1990), and use MNE and MNI numbers to generate percent-survival or the analogous percent-recovery rates (Crader, 1984b; Landon, 1996; Legge and Rowley-Conwy, 1991). One of the main advantages of percent-survival rates is that this measure has been used in actualistic studies that assess differential survival of skeletal elements (Binford, 1981; Brain, 1980), providing a basis for interpretation. Additional work to improve methods of quantifying and reporting skeletal-part representation is key to increasing

our ability to make comparisons among collections that go beyond simply taxonomic abundance.

Interpretation

Historical-zooarchaeology reports can be characterized in terms of their organization and goals: (1) site reports, with a primary emphasis on description of a collection; (2) interpretive or integrative site-based analyses that in addition to describing a collection offer more detailed interpretation—drawing in other historical, environmental, or archaeological data; (3) comparative analyses of multiple collections, either diachronic or synchronic; and (4) overviews that assess method or theory in the subfield. As with many taxonomic constructions, the categories overlap and have a subjective component. In most early studies, researchers produced descriptive site reports. The nature of the reports shifted as archaeologists developed the analytical skills necessary for faunal analysis and zooarchaeologists began to produce more interpretive and comparative reports. All types of reports can offer valid, albeit different, contributions to the field. Comparative and highly interpretive analyses are only possible with a foundation of descriptive work.

We can also categorize historical-zooarchaeology reports in terms of their interpretive emphases. The traditional emphases of prehistoric zooarchaeology are diet, subsistence practices, environmental reconstruction, and paleoeconomy. Early studies in historical zooarchaeology mirrored these interests, focusing on dietary and subsistence practices. Some researchers also investigated broader questions about reconstructing agricultural and other subsistence systems. Environmental reconstruction is relatively new in historical zooarchaeology, but has begun to appear; for example, in studies of urban environments (Mrozowski et al., 1989; Rothschild, 1989).

Zooarchaeology is by no means limited to issues of subsistence practices or environmental reconstruction. One valuable aspect of animal-bone studies is their potential to provide insight into many of the broader issues that interest historical archaeologists. In historical contexts it is useful to view bones as part of a comprehensive system of food production, preparation, distribution, consumption, and disposal. As Gumerman (1997) has shown, all of these stages are intertwined with a society's political economy and its patterns of social differentiation, creating opportunities to study these topics. There is growing recognition of the potential uses of faunal data to elucidate trade, ethnicity, social differentiation, the development of political complexity, and aspects of cultural change (Clark, 1987; Crabtree, 1990; Crabtree and Ryan, 1991; Gumerman, 1997; Hudson, 1993:181–272; Zeder, 1988, 1991).

Connecting counts of fragmented bones and teeth to complex cultural questions requires an interpretive translation that draws on biological, archaeological, historical, ethnographic, or other sources of information. This becomes especially important in interpretations of social variation and the symbolic meaning of food (Gumerman, 1997:109–111; Hall, 1992). In historical zooarchaeology, our understanding of the archaeological and historic context of an assemblage often includes detailed information about the function of a site, the people that occupied it, when it was occupied, and the basic nature of subsistence practices. This can extend to detailed information about the social, economic, occupational, ethnic, or religious background of a household, all of which increases the interpretive potential of bone collections. Often, the challenge in these situations is to develop an interpretation that does more than simply reiterate what we already know about a site.

General contextual knowledge helps build frameworks for interpretation. For example, Schulz and Gust (1983:Fig. 1) used historical-period data on butchery practices and prices of beef cuts to develop relative price ranks for cuts of beef, allowing us to connect observations of beef bones in an assemblage to historical-period categories of price-ranked butchery units (Fig. 2). Yentsch, despite disliking the scientific aspects of historical zooarchaeology, successfully interprets zooarchaeological data, primarily by drawing on detailed contextual information—contemporaneous bone assemblages, historical-period information about meat prices and availability, and ethnohistorical information about African foodways (Yentsch, 1994). A scientific, rigorous approach to faunal analysis does not in any way preclude interpretive studies. On the contrary, attempts to address more theoretically complex issues will only succeed when well supported by carefully crafted, rigorous analyses.

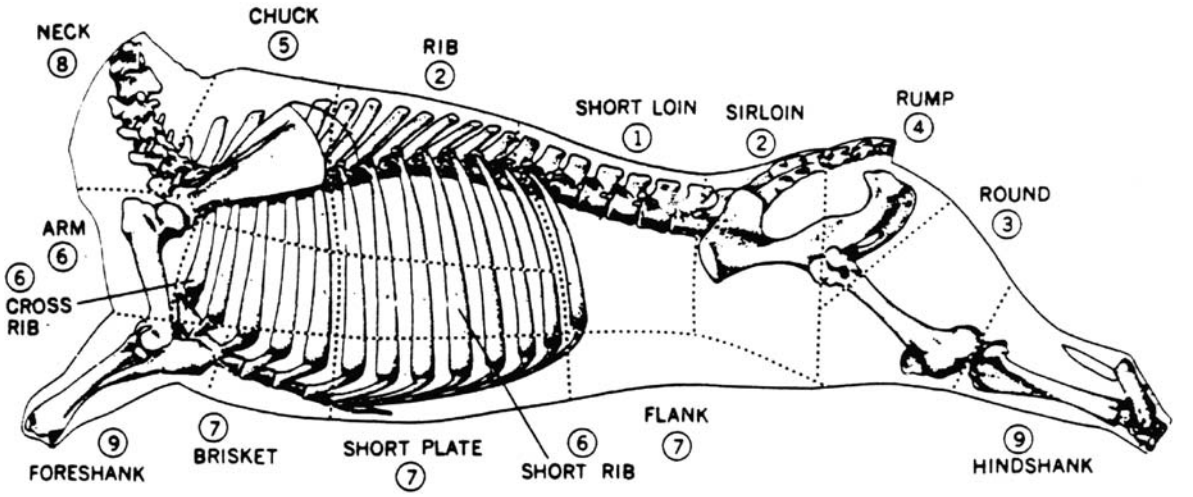

Fig. 2 Major secondary cuts of beef, ranked according to late-nineteenth-century retail values (from Schulz and Gust, 1983:Fig. 1)

Results

The subfield of historical zooarchaeology is sufficiently developed to have made some substantive contributions to our understanding of the past. This section reviews some of these contributions, organizing them thematically around four frequently interrelated topics: (1) diet and subsistence practices; (2) animal husbandry and food distribution; (3) social and cultural variation in foodways; and (4) archaeological interpretations. These categories overlap and many studies contain information about more than one topic; these categories primarily help organize the discussion. Given the rapid expansion in the number of studies of historical-period collections, it is impossible to review them all. It is, however, possible to get a sense of what has been accomplished and what questions remain for future research.

Diet and Subsistence Practices

The broad rubric of diet and subsistence practices encompasses studies of the relative dietary importance of different domestic and wild taxa; the technologies employed in raising, capturing, and processing animals; seasonal variation in the uses of different food sources; and a series of related topics. Most studies in historical zooarchaeology include some assessments of diet and subsistence practices, even when these serve as a precursor to other interpretations. A clearer understanding of past dietary practices is one area where historical archaeology has greatly augmented and altered our picture of the past. This is especially true for our conception of Colonial-period diet and the diet of both enslaved and free African Americans. One interesting topic researchers have addressed is how British, French, Spanish, and African people altered or maintained their traditional dietary practices in the new environments of North America. This relates to general questions about colonial adaptation, the transplantation of cultural traditions, and the patterns of interaction with indigenous populations—all of which are important emphases in the historical archaeology of colonialism (for an interesting South African example see Schrire [1992]). The effects of colonial interaction on the subsistence and foodways of postcontact Native Americans remain understudied, though this situation has been changing recently (Kuhn and Funk, 2000; Lapham, 2002, 2005).

Excavations at Jamestown, the first permanent English settlement in the colonies, have recovered information about the first years of the settlement—including "The Starving Time" of 1609–1610, when

the colony was almost lost due to severe food shortages. Bowen and Andrews's (2000:3) analysis of faunal remains from this earliest period of settlement show that the colonists relied much more heavily on wild animal foods in the first years than they did even 10 years later. The natural resources of the Chesapeake initially allowed the colonists greater access to prized wild foods such as sturgeon, porpoise, and wild birds. However, as the food shortage took hold during 1609, the colonists also began to consume undesirable or taboo animals such as dogs, rats, mice, vipers, musk turtles, and horses (Bowen and Andrews, 2000:7–20). Arrival of additional supply ships in 1610 saved the colony, but not before many had starved or succumbed to illness. While the history of this period is well known, Bowen and Andrews's (2000) analysis provides the first scientific and zooarchaeological insights into food consumption during "The Starving Time."

The later periods in the Chesapeake are much better known. Miller's (1984, 1988) multisite comparative analysis of collections from the seventeenth- and early eighteenth-century Chesapeake provides our best understanding of colonial British subsistence practices. In this region, as in most early colonial settings, the adaptation to a new environment and the development of the colony's economic and settlement system contributed to changes in dietary practices. The traditional importance of sheep in the British diet did not transfer to the Chesapeake, and cattle and swine became, respectively, the two most important domestic sources of meat. Wild animals, such as deer, small mammals, wildfowl, turtles, and fish, played an important role in the early colonial diet. The differential availability of these wild food resources, in combination with the yearly agricultural cycle, contributed to strong seasonal variation in food consumption.

Miller interprets the primary differences in this overall pattern as due not to economic variation among planters, but to changes through time. In the second half of the seventeenth century, the importance of deer, fish, and other wild foods in the diet decreased significantly, while the proportion of beef and pork in the diet rose. As the contribution of wild food resources declined, the diet became more uniform, with less seasonal variation in the types of meat consumed. Ultimately, a distinctive regional dietary pattern developed that was different from contemporaneous British practices. As Miller acknowledges, his broad overview includes little material from the poorest households or from slave or servant quarters. While more-recent work has expanded our understanding of animal husbandry and agricultural production in the Chesapeake (Walsh et al., 1997), there is still potential for additional research on sites within the region to elucidate more fully the dietary variation that occurred within plantations, and among different groups of people in the Chesapeake's highly stratified society.

Reitz's work on Spanish subsistence in the Southeast also shows how traditional practices were altered in the New World. The initial period of colonization saw major dietary change for the Spanish colonists. Attempts to directly transplant Iberian practices failed. Spanish livestock did not all thrive in the new environment, and domestic pigs, cattle, and chickens comprised only a small proportion of the diet. The greatest change was in the marked increase in the use of wild animals, which were hunted, fished, or acquired by trade with local Native Americans. Of particular importance were deer, gopher tortoises, sharks, sea catfishes, drums, and mullets. As with the pattern in the Chesapeake, the pattern for Spanish Florida changed through time. Early eighteenth-century Spanish diet in Saint Augustine still included a diverse array of taxa, but compared to sixteenth-century sites the importance of wild food resources dropped significantly, while the dietary importance of domestic mammals increased (Reitz, 1991:69).

In many ways, the early Spanish subsistence practices in Florida differed only subtly from those of contemporaneous Native Americans. The Spanish colonists apparently altered their diet to local resources and practices, borrowing heavily from Native American practices. Interestingly, the Native American diet does not seem to have undergone the same degree of change. Postcontact mission site bone assemblages vary little from precontact Native American bone assemblages, suggesting Native Americans altered their traditional food practices little. The single exception is a minor change in the fish species consumed due to adoption of some Spanish fishing technology. This comparison of Spanish and Native American diets and dietary change raises interesting questions about

processes of culture change and interaction that could be addressed in future studies.

French subsistence practices seem to have changed more than those of the British, but less than those of the Spanish. Cleland's (1970) comparative analysis of British and French assemblages from Fort Michilimackinac shows that the British diet was almost entirely based on traditional domestic mammals, while the French incorporated more wild mammals, birds, and fish into their diet. The British apparently relied on their superior trade networks to supply the fort, while the French had greater interaction and trade with Native Americans. However, even the French at the fort never had a diet that emphasized fish and other wild foods as much as that of local Native Americans. Scott's (1985, 1991, 1996) work on additional materials from Fort Michilimackinac has clarified and expanded our understanding, showing that the British at the fort, while relying heavily on domestic animals, ate more wild animals than did the British farther to the east. Additionally, while the diet of the French at Michilimackinac incorporated more wild animals than did French settlements farther to the east, it still included more domestic animal meat than did the most isolated French settlements.

Martin's (1986, 1988, 1991b; Jelks et al., 1989:75–108, 112–117) analysis of faunal assemblages from Fort Ouiatenon and the Laurens site shows that the French adopted more aspects of Native American subsistence practices at more-isolated outposts. The Laurens site, which had a relatively well-established French population, had a faunal assemblage that was dominated by domestic animals. Biomass calculations suggest that two-thirds of the meat consumed came from the domestic animals. Fort Ouiatenon, an isolated outpost with a smaller French population and a larger Native American population, shows a very different pattern. There, the biomass calculation suggests that less than one-third of the meat consumed was derived from domestic animals, with bulk of the diet from wild animals, primarily deer. The collection from Fort Ouiatenon also contains modified turtle carapaces, bone and antler tools, and birds apparently collected for their feathers, all of which have parallels at contemporaneous Native American sites. The variation that appears to exist among French sites could be further explored with additional samples, increasing our understanding of patterns of interaction between French and Native peoples.

Researchers have studied African American subsistence and tried to assess how African dietary practices were altered or maintained in the environments of the New World. Ferguson (1992) has argued that, at least for some of the South Carolina coastal plantations, there was a strong degree of continuity in African foodways, though faunal data was not a central part of his argument. Yentsch (1992) also argues for a strong African influence on Colonial Chesapeake fishing practices. In plantation contexts, it remains unclear what degree of choice enslaved people had in their diet and how much their dietary pattern was forced on them by others. Reitz (1994b) studied the faunal collection from the eighteenth-century free African site of Gracia Real de Santa Teresa de Mose (Fort Mose), north of Saint Augustine in Spanish Florida. Contemporaneous collections from Saint Augustine and the Nombe de Dios Native American village provided comparative data. Consumption of domestic animals at Fort Mose was much greater than at the Native American village, but less than at Saint Augustine. The pattern of wild animal use is virtually identical to that at the Native American village, with an emphasis on estuarine resources that could be captured with relatively simple techniques. No specifically "African" elements of the subsistence pattern are visible from the bones, although this does not preclude the continuation of African traditions in food preparation or consumption.

More is known about African American diet from studies of slave-quarter faunal collections. As Singleton notes (1991:171), "The study of food remains has perhaps contributed more to the amplification of written records on slave living conditions than any other archaeological resource." Evidence at many plantations shows enslaved people used wild food resources to augment rations issued by the planters. On coastal plantations, the use of estuarine resources such as fish, turtles, and aquatic mammals was particularly important. More interior plantations also used many wild resources, primarily birds and small mammals (Reitz et al., 1985:185). Many of the wild taxa represented in slave-quarter

collections could have been caught with traps, nets, or snares in some combination of purposeful and opportunistic collecting (McKee, 1987:38; Reitz et al., 1985:184). While it remains challenging to identify specifically African dietary choices, the consistent use of wild resources shows a conscious effort to supplement insufficient or unsatisfactory plantation food rations.

Beef and pork were the two most important types of meat issued in plantation rations. Specific quantities are difficult to judge, especially because some preserved pork was distributed boneless, but beef appears to have been equally or more important than pork on some plantations (Reitz et al., 1985:169). Enslaved people were typically given lower quality cuts, possibly reusing some bones for soup after they had been stripped of most meat for the planter's table (McKee, 1987). At Monticello, there is good evidence for variation in the cuts of meat issued to specific slaves. Crader (1984a, 1989, 1990) compared faunal collections from three contexts at Monticello. Two came from buildings used as slave dwellings and one came from a dry well filled with trash from the plantation house. The material from one of the dwellings, Building O, contains bones of meaty cuts of pork that appear from the butchery marks to have been prepared as roasts rather than in stews or soups (see Fig. 1; Crader, 1990). This pattern is quite different from the other slave-dwelling collection, and more in line with the plantation house collection.

More-recent studies have used the implications of subsistence and dietary data to explore broader social issues. McKee (1999) has studied plantation food supply and interpreted what it means for aspects of social relations on the plantation, as enslaved people engaged in a range of activities to supplement their diets and incomes, while owners tried to control their behavior. Franklin (2001) has looked at the diet of Virginia's enslaved population in the context race and identify tracing aspects of African and African American cooking practices and characterizing how distinctive foodways contributed to group identity and, ultimately, to the development of regionally distinctive cuisine.

The situation for enslaved and free Africans and African Americans in the North appears to be slightly different, though archaeological research on slave sites in the North is admittedly far less developed. In general, wild animal foods appear to be much less important in the diet in the North. At the Royall House in Massachusetts and Sylvester Manor in New York—both wealthy households with enslaved workers—the faunal collections are strongly dominated by the remains of cattle, pigs, and sheep, with few wild animals present (Newman and Landon, 2002; Sportman, 2003). At the Carr site in Rhode Island—the early nineteenth-century household of a free African American tenant farmer—heads, hocks, and feet of cattle, pigs, and sheep dominate a very small faunal assemblage (Landon, 1997a). The small size of the assemblage and the predominance of low-meat parts together might reflect the diet of a poor household that included little meat. While more collections need to be studied, the pattern of intensive use of wild animals seen in the South does not seem to hold in the North. This might reflect a broader pattern of regional variation, as most Euroamerican assemblages in the North show a strong emphasis on domestic animals for food.

Our knowledge of subsistence practices in the West is much more limited, especially for colonial sites. Archaeologists have studied the effects of Russian and Spanish colonial contact on Native American diet (Lightfoot et al., 1998; Spielmann, 1989), but have not given as much attention to the colonists themselves. Snow and Bowen (1995) report on a series of pre-1680 Spanish colonial contexts in Santa Fe, New Mexico. Their study shows a clear dietary emphasis in Santa Fe on meat from domestic livestock, predominantly mutton and beef. This is a clear contrast both to local Native American sites and to Spanish colonial sites in the Southeast, suggesting the value of additional studies of southwestern Spanish zooarchaeological assemblages. This work could likely make an important contribution if it was framed by broader questions about colonialism and culture contact in the Southwest.

More is known about later nineteenth-century sites in the West, as American expansion caused new forts, trading posts, and mining camps to be built across the region. Several studies have examined zooarchaeological collections from these sites, emphasizing a variety of issues. These include the connections to food-provisioning networks (Crass

and Wallsmith, 1992), local butchery practices (Szuter, 1991), and social variation within communities (Schmitt and Zeier, 1993). Several interesting studies have also investigated subsistence practices among Chinese in the West, both at mining sites and in urban areas (Gust, 1993; Langenwalter, 1980; Longenecker and Stapp, 1993). The general impression is that overseas Chinese maintained aspects of their traditional food practices, including a preference for pork and poultry and their use of Chinese cleavers in butchery. Of course, their ability to eat a traditional diet was subject to both constraints of the food supply systems (Longenecker and Stapp, 1993) and to the economic situations of different Chinese communities (Gust, 1993).

The final topic considered under diet and subsistence studies is seasonality. Seasonality is an important concept in prehistoric zooarchaeology, especially in cultures where seasonal resource-use practices are coupled with seasonal settlement patterns. In these situations, determining season of site use becomes an important goal of faunal analysis. Seasonality is often given less attention in studies of sedentary agricultural societies. Davidson (1982) suggests the possibility of identifying seasonal holiday foods in bone collections. Shapiro (1979) and Miller (1984, 1988) have both looked at seasonal variation in diet by identifying and quantifying animal resources in short-term deposits. Both identify similar patterns, with domestic mammals most important during the late fall and winter, and more fish and wild fowl incorporated in the diet during spring and summer. Bowen (1988; Walsh et al., 1997:178–180) has taken a slightly different approach, using documentary information on the exchange of products to define seasonal use of different foods. I have extended Bowen's work by using tooth cementum increment analysis to test her models of seasonal slaughter of domestic mammals, and to see if urban markets altered seasonal slaughter patterns (Landon, 1991, 1993, 2008). This work supports Bowen's rural patterns and shows that domestic animal slaughter followed a strongly seasonal pattern. Further, it suggests that Colonial towns followed a rural slaughter cycle. Although results to date are limited, the potential of seasonality studies seems great.

Animal Husbandry and Food Distribution

Historical-period faunal collections often contain many domestic animal bones, and these often can be studied to gain insight into past animal-husbandry practices. The uses of animals for draft, dairy, food, or other purposes can often be interpreted from age data, butchery patterns, and skeletal-part representation (e.g., Payne, 1973). Bowen (1975) combined animal-bone data with historical-period information to interpret animal husbandry at Mott Farm in Rhode Island. Jacob Mott's probate inventory listed 73 sheep, 21 cattle, and 10 pigs, while the bone collection contained pigs and cattle in roughly equal numbers, and only half as many sheep. The difference in relative representation, in combination with age data, suggests the uses of the animals. The Motts raised pigs for food and slaughtered them young, raised sheep primarily for wool and for sale, and raised cattle for dairy products and meat.

Miller (1984) also uses age data to interpret animal-husbandry practices. He notes a shift in the ages of cattle represented in seventeenth- and early eighteenth-century assemblages in the Chesapeake, with later sites containing greater numbers of older cattle. Miller attributes this shift to an increased use of cattle for draft purposes, which resulted from land clearing and greater use of roads. Reitz (1986b; Reitz and McEwan, 1995) interprets the uses of animals at Puerto Real, Haiti, from both taxonomic and skeletal-part representations. Cattle dominate the collection from one area of the site in particular, Locus 39, likely a reflection of successful cattle production for hides and other trade products. The cattle skeletal-part representation supports this interpretation, with bones from the carpus and tarsus disproportionately overrepresented. Some of the bones are residential food refuse, but the bone scrap and the cattle carpals and tarsals are likely refuse from skinning and meat preservation that was subsequently used for making tallow and other by-products (Reitz, 1986b:327).

One component of examining the uses of animals is studying the trade and exchange of live animals and meat. Taxonomic representation, skeletal-part representation, age data, and butchery patterns can all help elucidate these issues. Klippel and Falk

(2002) identified the remains of Atlantic cod in the wreck of the nineteenth-century steamboat *Bertrand*. This fish was being taken up the Missouri River as part of the ship's cargo, a reflection of the developed trade in preserved fish. Seventeenth-century Dutch shipments of barreled beef sometimes excluded the head, metapodials, and phalanges (van Wijngaarden-Bakker, 1984), though nineteenth-century American shipments of barreled pork could include a full range of skeletal parts (Hattori and Kosta, 1990). In his study of Brimstone Hill Fort on Saint Kitts, Klippel (2001) noticed that cattle head and foot elements are underrepresented in the collection. He interpreted this as a sign of barreled-beef imports, a conclusion he supported with stable-isotope data showing some cattle raised in nontropical, temperate environments (Klippel, 2001:1195).

Differential taxonomic representation at urban and rural sites can also provide information about urban markets and the differential availability of products in urban and rural areas. Reitz (1986a) found that urban or rural site location had an overarching effect on assemblage composition in the Southeast. Similarly, in comparing urban and rural assemblages in Michigan, Mudar (1978) found that early nineteenth-century households in Detroit ate much less wild meat than did the residents of the rural Filbert site. Reconstructing urban food supply and exchange systems has been an important component of my own work (Landon, 1993, 1996, 1997b). In my study of Colonial Boston, I compared collections from two rural farms and two urban sites to characterize urban–rural differences and describe urban food-distribution systems. Analyses of taxonomic representation, skeletal-part representation, butchery practices, and age and seasonal slaughter patterns show some urban–rural differences. Urban residents ate more mutton, lamb, seafood, and fewer wild mammals. Urban butchers sometimes removed cattle feet early in the butchery process and urban residents sometimes preferentially purchased meaty limb portions of carcasses. In most ways, however, the urban and rural collections are striking more for their similarities than their differences. The structural transformations that ultimately separated Bostonians from traditional agrarian practices did not begin until the end of the eighteenth century, and did not fully take hold until the early nineteenth century.

Many studies of urban collections recognize the importance of food-marketing systems and work to interpret the nature of markets, how they changed through time, and how households interacted with market systems (Bowen, 1992, 1998; Bowen and Manning, 1994; Burk, 1993; Henn, 1985; Henry, 1987a). A good example is Henry's (1987a) study, in which she proposes an urban subsistence pattern for turn-of-the-century Phoenix, Arizona. This urban pattern is based on the purchase of professionally butchered meats and commercially prepared foodstuffs, with household access to and choice of goods structured by their social class and ethnic traditions. Other studies complement this research. Bowen (1992) found little clear ethnic differences in urban collections from the African Meeting House and Narbonne sites in Massachusetts, suggesting that urban markets structured the assemblages more than did any other factor. Henn (1985) has studied the "urban foodchain" in New York, and cautions that differential refuse-disposal habits, consumption of boneless cuts of meat, and reliance on nonmarket resources might hinder our ability to make accurate interpretations. With our broadened understanding of the nature of urban market systems, future studies can better explore how individual households interacted with markets, evaluating "when and how the transition to full dependence on commodity purchases occurred in urban contexts" (Henn, 1985:208).

Social and Cultural Variations in Foodways

Researchers studying historical-period faunal collections often focus on how socioeconomic status and ethnicity pattern food consumption and thus bone refuse at sites. These are important topics to study in stratified and pluralistic societies. As Deagan points out, studies by Mudar and Otto helped establish these research emphases, and "few similarly oriented studies since then have advanced that work significantly" (Deagan, 1996:365). Mudar (1978) compares six collections from early nineteenth-century trash pits in Detroit, examining differences between French and non-French households and among households of different economic status. Residents

of French households ate more mutton, turkey, goose, and pigeon than did those of nonFrench households. Wealthy households consumed more pork than did poorer households; however, specific price-ranked beef cuts were not purchased in a pattern that clearly correlated with either ethnicity or economic situation.

Otto's (1984) study compares faunal remains from the planter's kitchen, overseer's house, and a slave cabin at Cannon's Point Plantation, a sea-island cotton plantation off the Georgia coast. He examines how the patterning of the archaeological assemblages reflects the known status differences of the wealthy, white planter; the hired, white overseer; and enslaved African Americans. The remains of wild animals dominate all of the collections. The slaves and the overseer both consumed many fish, reptiles, and small mammals that would have been caught in the creeks, marshes, and woods immediately surrounding the plantation. The planter's assemblage contained a greater diversity of wild food resources, including fish and turtles caught by enslaved fishermen in habitats away from immediate vicinity of the plantation. The planter also had first pick of the domestic stock of the plantation, eating more and better cuts of beef. Butchery and ceramic-vessel-form data also suggest that the planter ate more roasts served on platters, while the overseer and slaves ate more stews and one-pot meals from bowls. Part of the strength of Otto's (1984) study is its skillful combination of multiple strands of archaeological and historical evidence. In this regard, it continues to provide a valuable model for future studies.

Since Mudar's price ranking of beef cuts, many researchers have collected historical-period information about the relative prices of different types or cuts of meat to interpret animal-bone collections in terms of the cost of the meat and the purchasing patterns represented (Henn, 1985; Henry, 1987b; Landon, 1987a; Milne and Crabtree, 2001; Rothschild and Balkwill, 1993; Schulz and Gust, 1983; Singer, 1985, 1987; Yentsch, 1994). Some of this research has expanded our ability to characterize urban dietary variation. Milne and Crabtree (2001) studied a series of collections from the 1840s working class households in New York's Five Point's neighborhood, including that of a rabbi, a carpenter, and a brothel. Despite differences among the collections, they all are dominated by inexpensive cuts of pork and beef and large quantities of local fish. This pattern differs strongly from that of middle class households, which consumed few local fish and much more poultry (Milne and Crabtree, 2001:44).

In one early, influential study of costs of meat and dietary variation, Schulz and Gust (1983) use historical-period data on butchery practices and prices to develop a relative ranking of beef cuts (see Fig. 2). They use this ranking to compare four Sacramento collections from markedly different economic situations: a jail, two taverns, and a posh hotel. The relative representation of different price-ranked cuts of beef clearly followed the pattern of the relative economic rank of the collection, with more high-priced cuts at the hotel and more low-priced cuts at the jail.

Schulz and Gust's article stimulated additional research and many studies followed that offer improvements to their approach or delineate problems with interpretations of socioeconomic status. Lyman (1987a) suggests more rigor in defining "socioeconomic status," and Lyman (1987a) and Huelsbeck (1989) propose measures of cost efficiency as an alternative way to rank beef purchases and investigate purchasing patterns. Henn (1985) and other researchers point out the potential for boneless cuts to skew the meat patterns represented by bones. In addition, food preparation and consumption practices might have been equally as important a reflection of economic status as the cuts of meat consumed; contrast a family dinner set by servants with a large boardinghouse dining room (Landon, 1987b). Yentsch's research on eighteenth-century meat values also shows that nineteenth-century conceptions of meat cut values and interpretations of "butchery waste" should not be uncritically pushed into the past. Finally, a number of analysts have emphasized that other variables might have stronger effects on assemblage patterning than economic status, including taphonomic and recovery processes (Reitz, 1987), site function (Reitz and Zierden, 1991), systemic variation in meat availability (Huelsbeck, 1991; Schmitt and Zeier, 1993), and the nature of urban market systems (Bowen, 1992). Future studies cannot assume a direct relationship between socioeconomic status and assemblage patterning, but must make a more

comprehensive assessment of the potential factors affecting bone assemblages.

Other studies focus more on ethnicity or race than socioeconomic status, examining faunal collections from Jewish households (Stewart-Abernathy and Ruff, 1989), Dutch and British settlers in New York (Greenfield, 1992), Chinese in the West (Langenwalter, 1980), and enslaved and free African Americans in the Chesapeake (Franklin, 2001; McKee, 1987; Warner, 1998). These studies have had mixed results. Not surprisingly, ethnicity seems to have the strongest effect on assemblage patterning when ethnic dietary practices are markedly different and identifiable. Unfortunately, bones give a very incomplete view of the complex system of past foodways. Animal-bone collections often tell more about *what* was eaten than *how* it was prepared or served, leaving ethnic variation in food preparation and consumption difficult to discern.

Future studies of economic status and/or ethnicity should explore how food choice, preparation, consumption, and discard serve to create and define individual and group identities. This approach goes beyond showing the patterns that exist to interpreting how the patterns reflect active behaviors aimed at maintaining or altering ethnic, racial, or economic identity, an approach exemplified in both Warner's (1998) study of African Americans in Annapolis and Scott's (1996) study of late-eighteenth-century households from Fort Michilimackinac. In her study, Scott compares material from essentially contemporaneous French-Canadian, British, and German-Jewish households and assesses cultural variation in food consumption. Overall, the dietary variation within the fort is not extreme and there are broad similarities attributable to the fort's provisioning system and the resources available locally. There are, nonetheless, specific ways food functioned as an expression of identity. When the German-Jewish trader Eziekiel Solomon first arrived at Michilimackinac, his choice of food was much like that of his neighbors, and he apparently ignored Jewish dietary rules and deemphasized his distinctive identity. Later, when he was more established and had become a successful trader, he altered his diet to more closely fit Jewish practice, greatly decreasing his consumption of pork, wild birds, and wild mammals. In Scott's interpretation, the emphasis is not on how availability of provisions and local resources structured food consumption, but how, within the structure of available foods, people's food consumption both reflected and created their identity.

Archaeological Interpretations

The spatial patterning of bone assemblages at sites can contribute to a variety of interpretations about site formation processes and cultural patterns of bone-disposal practices. Studies of this nature often have, either implicitly or explicitly, a strong taphonomic emphasis in that they try to explain the reasons for the patterning of assemblage attributes. Taxonomic representation, skeletal-part representation, bone-surface modification, and other criteria can all contribute to these interpretations. I categorize these as "archaeological" interpretations because they typically pay very close attention to details of archaeological context and assemblage-formation processes. This research contributes not just to stronger analyses of bone collections, but also to a better understanding about overall site function and formation. Faunal evidence for site formation processes is seldom integrated into general site interpretations, an accomplishment that remains for future studies.

Price's (1985) study of intrasite distribution of faunal remains at an Ozark farmstead is an interesting and fundamentally archaeological interpretation. Her primary goal is not to reconstruct diet, but to examine how the differential distribution of faunal remains in site features reflects specific site activity areas and the butchering, cooking, consumption, and bone-discard practices for specific taxa. The archaeological patterning of species and element representation in specific deposits matches historical-period and ethnographic accounts of the differential processing and use of small mammals, birds, cattle, and pigs. As Price points out, faunal collections from individual features are not representative of overall dietary practices when animal processing and bone disposal is spatially patterned. Price's approach to the use of space and the spatial segregation of tasks might be fruitfully combined with Gibb and King's (1991) approach to studies of age and gender divisions of labor to develop

additional interpretations of labor division and activity areas on farmsteads.

Reitz (1994a) has used taxonomic representation to assess whether wells were left open and served as natural traps or were filled quickly and never functioned as traps. Whyte's experimental study shows that small amphibians, turtles, and mammals are all caught in natural traps, with young animals caught more frequently than old ones (Whyte, 1988, summarized in Reitz, 1994a:146–147). High frequencies of these small commensal taxa in well assemblages or a concentration of bones from these taxa in lower levels could suggest that the well functioned as a natural trap. Barber (1976) recognized a high proportion of commensal taxa in the Bray Plantation well and an examination of the taxa represented in light of Reitz's criteria suggests it might have functioned as a natural trap.

Reitz looks for these characteristics in a series of well assemblages from the Southeast. Most of the wells do not appear to have functioned as natural traps and were probably intentionally filled over a short period of time. This research area could be easily expanded to broaden the range of conclusions about feature filling. For example, assessment of the degree of carnivore gnawing and bone weathering could help determine whether the quick filling episode was mostly secondary refuse deposition, such as dumping kitchen trash straight into the feature, or tertiary deposition, such as dumping yard sweepings or other yard trash into the well. In the first instance, fewer bones will have dog chew marks or weathering damage than in the second case. Answers to these types of questions make a general contribution to interpretations of artifacts from feature fill.

I examined taxonomic representation, skeletal-part representation, butchery-mark frequency, bone burning, and weathering in a bone collection from Fort Christanna (Landon, 1992). The specimens were highly fragmented, extensively modified, and difficult to identify—making dietary interpretations difficult. Nonetheless, the collection provided much information about site formation processes. Two root cellars held concentrations of burned bone, a result of tertiary deposition of fireplace trash. The third bone concentration was a surface midden adjacent to the fort's palisade wall. This contained a small number of burned bones and some differentially weathered bones that suggested stability during slow burial. These characteristics helped define an area that functioned as a surface dump for food refuse, perhaps a butchering or processing area as well. Though we cannot be confident about drawing extensive dietary conclusions from the collection, we can use the bone characteristics to gain insight into the use of space and refuse-disposal practices at the fort. This approach potentially increases the analytical value of highly fragmented and modified bone collections.

Beyond Subsistence: Future Directions in Historical Zooarchaeology

Virtually all of the topics covered to this point could benefit from additional work, and few of the future directions it is possible to envision represent a total departure from past interpretive emphases. It is important to avoid the tendency toward "intellectual deforestation" that results from dismissing all past work in favor of the theory or approach of the moment. It is preferable instead to emphasize the cumulative nature of archaeological research and the ways future research questions build on and relate to past studies. In this sense, assessing our current state of knowledge is a necessary precursor to suggesting future methodological, interpretive, or theoretical directions. One of the strengths of historical archaeology is its pluralistic view of the past, and there are numerous different insights future animal-bone studies can potentially contribute.

In his 1983 review of historical zooarchaeology, Jolley (1983:75) stresses the potential of comparative analyses to document and interpret intrasite and intersite variability in assemblages and their relation to settlement type, socioeconomic status, and temporal and spatial variations. Many such studies have appeared in the intervening years, showing the strength of multicollection comparative analysis. The full value of this type of work is far from realized. Perhaps the most direct way future studies build on previous work is through reanalyzing past collections with new questions and methods. A study by Walsh et al. (1997), *Provisioning Early American Towns*, an NEH-funded

project that brought together zooarchaeological data from some 50 excavated sites, is perhaps the preeminent example. Historical archaeology is further along in the Chesapeake than in most other regions, but continued excavation of sites will hopefully allow a similarly detailed corpus of data to be gathered for other regions, creating the opportunity for similarly complex multisite analyses.

Several other overview articles (Crabtree, 1990; Gumerman, 1997; O'Connor, 1996) stress the need for "integration" as a key for future development. In its simplest form, the idea is to treat bones as another form of archaeological data and make certain that they are fully incorporated into archaeological interpretations. Crabtree (1990:188–190) suggests that the future for zooarchaeology in the study of complex societies lies in integrative and interpretive studies drawing on archaeological data, historical-period information, pictorial representations, and computer simulations. Similarly, Gumerman (1997:112) suggests that researchers studying complex societies use "contextual associations, language, iconography, ethnography, and ethnohistory to provide details concerning the symbolic nature of food." Reitz et al. (1996), in their book, *Case Studies in Environmental Archaeology*, provide a good model for integrating diverse sources of environmental data. Integration of diverse material has always been a core issue for historical archaeology. Nonetheless, successful interweaving of archaeological, historical, anthropological, environmental, and other strands of data remains a key challenge for future development. The value of working in this direction lies in the potential synergy.

One research area that could be much better developed is the connection of zooarchaeological data to cooking and other aspects of food preparation and consumption. Improvements in our ability to recognize specific cooking practices from bone collections would provide new ways to link bones with pots and people. Drawing together anthropological approaches to the meaning of foods with historical-period and archaeological data about cooking, serving, and eating would help us develop more holistic explanations of the symbolic and cultural dimensions of foodways. Detailed foodway studies also have much to gain from a more explicit consideration: gender roles and the gender division of household labor, topics often overlooked in zooarchaeological studies (Gifford-Gonzales, 1993). Yentsch's (1994) study of the Calvert household is an example of how this approach could be framed for historical-period sites.

There are several research areas where historical zooarchaeologists could potentially make methodological contributions, including improvements in tooth wear aging, cementum increment analysis, quantification, and butchery analysis. While new or improved methods of analysis have their own merit, they are most important when they help stimulate new interpretive directions. For example, Reitz and Ruff (1994) and Cossette and Horad-Herbin (2003) have both published analyses of cattle-bone measurements, documenting cattle size and looking at variation both through time and among sites (Fig. 3 [after Reitz and Ruff, 1994:705, Fig. 2]). Cattle size and morphology varies greatly between their samples, raising important interpretive questions about the original source stock brought to the colonies, the response of domestic animals to New World environments, animal-husbandry practices, and the development of regional breeds.

There are a variety of other new scientific or analytical methods, including identification of DNA and other ancient biomolecules and stable isotope analysis, that could potentially be applied to historical zooarchaeological collections, opening new questions for study. To choose one area of scientific zooarchaeological research, there have been important advances in the use of fine-scale growth structures to determine the ages of animals at death and to reconstruct aspects of their life history (Klevezal, 1996). Stable isotope data from teeth are increasingly augmenting this line of research, providing information about the season of birth of animals (Balasse et al., 2003) and even weaning practices for domestic cattle (Balasse and Tresset, 2002). These types of specific data about animals' life histories could potentially provide detailed, significant new insights into aspects of past animal-husbandry regimes.

Future studies that move past just dietary reconstruction to broader environmental archaeology questions will increase the field's contributions to our understanding of the environmental consequences of

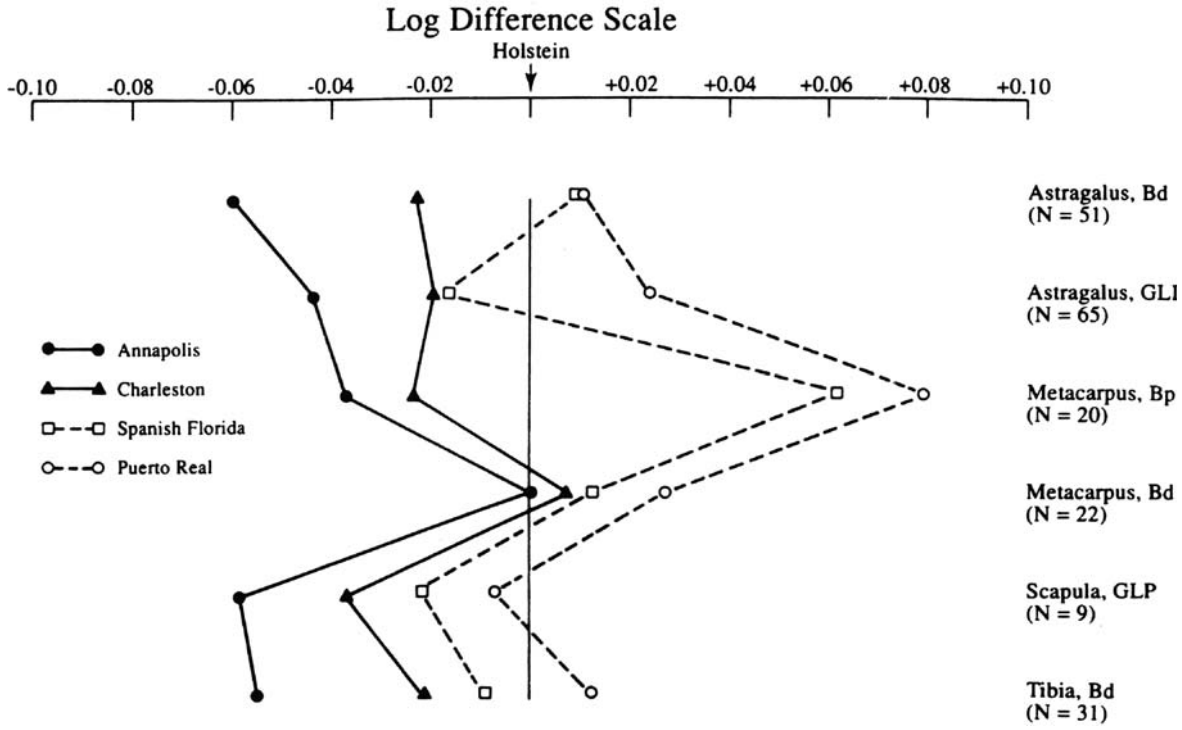

Fig. 3 Log ratio diagram for selected cattle bone measurements. Based on the formula $d = \log X – \log Y$, where d is the logged ratio, X is the mean of a specific dimension in an archaeological sample, and Y is the same dimension in a known standard. Positive values are larger than the standard and negative values are smaller than the standard (from Reitz and Ruff 1994:705, Fig. 2)

past human action (Redman, 1999). It is possible to take a "historical ecological" (after Crumley, 1993) approach that focuses on the diachronic interrelationships among the environment, technological systems, and social systems, embedded in a model of culture that includes active individuals in groups with potentially conflicting interests. The historical period is one of rapid environmental change, much of it human induced, yet historical archaeologists have paid little attention to this topic. We should engage this significant modern issue both through our research and through public-education efforts that highlight our disciplinary insight into the role of humans in past ecosystems and environmental change (Marquardt, 1994).

There are many issues warranting this approach. The temporal period covered by historical archaeology saw significant environmental change with lasting consequences for the present. European exploration and colonization spread plants, animals, and diseases around the planet on a massive scale (Crosby, 1986), with differential consequences for specific populations. The budding urban areas that were colonial outposts changed the environment and set a foundation for future settlement and growth patterns. Expansion into interior areas, such as the American West, brought conflict with indigenous peoples and the institution of new subsistence, economic, and resource-use patterns. With the onset of industrialization, the pace and scale of resource exploitation increased, human–land interactions were altered in significant ways, and we were set on the path toward our current environmental predicament.

Some of these topics are, in fact, approachable through historical zooarchaeology. Studies of the past distribution of animals and their culturally induced changes through time can provide insight into the human role in environmental change and its consequences, in turn, for people. For example, Armitage (1993) has studied the successive waves of invading rats in the New World, outlining their spread and some of their economic effects. At the level of the individual site, rat bones, rat-gnawed

bones, and rat-gnawed macrobotanical remains from the Lowell boardinghouses contributed to reconstructing the conditions in the boarding-house's back lots, and interpreting urban health and sanitation (Mrozowski et al., 1989). Specific economic and subsistence systems also had environmental implications. Hales and Reitz (1992) examine changes in age and growth rates of Atlantic croaker based on otoliths recovered from pre- and postcontact sites in Florida. Dramatic changes took place after Spanish settlement, possibly as a result of increased fishing pressure. Rojo (1986, 1987) has generated equations to estimate the size and weight of live cod from bone measurements. This could easily be applied to historical-period collections—where cod remains are often common—to examine fish size and look for the long-term effects of intensive fishing on cod populations. Similarly, Hamilton (1993, reprinted in Orser, 1996) takes a broad view of the environmental implications of the fur trade, and examines the consequences of changes in food availability for the fur trade social system. Studies that examine the spread and consequences of domestic or introduced animals (e.g., Clason and Clutton-Brock, 1982; Tchernov and Horwitz, 1990), reconstruct local environments, assess effects of new subsistence practices on the environment, or address other historical-ecological questions will make important new contributions to our understanding of the past and push the broader field of historical archaeology in new directions.

Historical archaeology is currently in a period of theoretical exploration; critical and interpretive approaches are at the fore and cultural dynamics are viewed as preeminent, while issues of biology and the environment seem at times extraneous to understanding past social variation and change. While in many ways historical archaeology maintains a healthy diversity in the paradigms of its practitioners, the current trajectory arguably emphasizes humanistic and interpretive approaches more than scientific research. This has proved somewhat problematic for zooarchaeology, which typically incorporates scientific aspects of taxonomic classification and draws on biological and ecological models. Zooarchaeology's early growth in conjunction with functionalist and ecological models of culture, and the continuing effects of this parentage, has left it at times incompletely integrated into an interpretive archaeology. O'Connor (1996) sees British zooarchaeology as having been partially left behind, "marooned in a functionalist paradigm," while the rest of archaeology moved forward theoretically. Yentsch (1994:219), in an interpretive study, describes historical zooarchaeology as a separate "realm of inquiry, highly specialized, objective, quantitative, and generalizing," where "people and their actions are momentarily left behind." Classification and quantification of specimens in modern taxonomic and biological categories tend to distance us from the bones' past cultural meaning. Connecting explicitly scientific zooarchaeological research to richly humanistic and historical interpretation remains a central challenge as researchers bring new interpretive theoretical perspectives to their data.

Two recent zooarchaeological studies of colonial contexts provide good examples of linking scientific, rigorously empirical research to anthropologically sophisticated interpretations that embrace the complex social dynamics of specific historic contexts (Heinrich, personal communication, 2007; Lapham, 2004, 2005). Heinrich and Lapham both consider multiple sites in a comparative framework to consider functional or temporal variation, and both consider the interactions between colonizers and indigenous peoples. Heinrich's ongoing dissertation research (as of 2008) looks at the Dutch East India Company in South Africa and the meat industry that developed to support the local garrison and provision trade ships. The company's herds were developed through trade with indigenous Khoekhoe pastoralists and by hybridizing local animals with imported stock. By studying a series of functionally different contexts, Heinrich is able to explore a variety of questions about the meat industry, as well as the development of a distinctive colonial culture at the Cape.

Lapham's (2004, 2005) research looks at the dynamics of colonialism in the Mid-Atlantic from the perspective of the Native Americans involved in the fur trade. In addition to charting the effect of the trade on hunting and animal processing, she integrates a variety of other strands of historical and archaeological data to assess the social and cultural implications of this trade for the Native American participants. In this instance, detailed zooarchaeological data are linked to broad

questions about colonialism, the development of global trade systems, social stratification, and Native American decisions about engaging in exchange with colonizers. Lapham's work also blurs the line between historical and prehistoric archaeology, a hallmark of the future of our discipline.

As with these studies of aspects of colonialism, future interpretative studies will be the most meaningful if framed in a historic context that fully encompasses the complexity and plurality of the past. As we study past social variation, we must go beyond simply documenting patterning to interpretations of the roles and functions of foods in cultural systems that served to create and define social boundaries, as in Franklin's (2001) study of race and foodways in Colonial Virginia. As we study the emergence of capitalist market systems (Little, 1994), we can elucidate the process of commoditization, the move of production outside the home, and the diverse ways individuals and households interacted with changing market systems. Studies of animal-bone collections have added much to our comprehension of the past. Future researchers must now try to build on this framework to realize the full potential of historical zooarchaeology.

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Going, Going, Gone: Underwater Cultural Resources in Decline

Donald H. Keith and Toni L. Carrell

Introduction

Seen from the vastness of space, Earth is a pale blue planet with high white clouds and water covering nearly three-quarters of its surface. Global civilizations emerged on the margins of its vast seas. Watercraft allowed humankind to explore the earth and played a major part in the rise and fall of great empires. Underwater archaeological sites reflect the diversity of human cultures and endeavors, as well as the earth's environments. These sites include human remains and habitation sites from the bogs of Northern Europe, submerged cities and temples on the shores of the Mediterranean Sea, religious offerings in Central American cenotes, machinery and equipment abandoned in flooded mines and reservoirs, components of land-based industrial sites, trade goods lost in river rapids, and the elusive sites of early humans covered by rising sea levels. The vast majority of underwater sites that have been investigated to date, however, are shipwrecks and, with few exceptions, nearly all shipwrecks are from the historical period.

While it is true that—in the simplest sense—underwater archaeology is just archaeology that happens to take place in an aqueous environment, in reality it has a highly specialized subject matter, tool kit, research thrust—and set of problems. Specific research questions are relatively easy to answer: How was a trireme rowed? When did the early style olive jar cease to be made? What is the most efficient current density to use for electrolytic reduction of wrought iron? But the subject of this chapter is a larger question, central to all others, which is seldom, if ever, asked: How much of the resource have we used up and how much is left?

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Historical Perspective

In 1832, geologist Charles Lyell wrote, "It is probable that a greater number of monuments to the skill and industry of man will in the course of ages be collected together in the bed of the ocean than will exist at any one time on the surface of the Continents" (Lyell, 1832–1833:2:258). Stated a little differently, Lyell realized that virtually every item of material culture that had fallen into bodies of water deep enough, cold enough, violent enough, or dark enough to discourage retrieval were still there, and that they constituted an archaeological resource held in trust for all humankind on deposit in a vast underwater bank.

The publication of the book in which this observation was made, *Principles of Geology,* coincided with the nascence of surface-supplied, closed helmet diving. The development of this new technology issued in the Age of Human Exploration of the Seabed—and simultaneously started a run on the bank of underwater archaeological resources that had, up to that time, remained beyond reach. In the same year that Lyell's book was published, pioneer hard-hat divers John Deane and William Edwards established themselves as "submarine engineers" in Portsmouth and soon after amply demonstrated the efficacy and

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profitability of salvaging cannons and other objects from the wreck of the English warship *Royal George* (sunk 1782) in Spithead Harbor (Fig. 1).

It was only natural that, from the beginning, divers and underwater explorers were attracted to shipwrecks, sunken cities, and other types of submerged sites, but major withdrawals from the underwater archaeological bank were not made until after World War II. The technological breakthrough that made the wholesale exploitation of underwater sites possible was the Aqua Lung, which put underwater exploration within reach of the average person. Here again, it was the 1952 salvage of a ship, a 2,200-year-old Roman vessel wrecked beneath the cliffs at Grand Congloué, France, that showed the new technology's potential and, in the process, captured everyone's imagination and jump-started the second career of a hitherto-unknown former naval officer, Capt. Jacques-Yves Cousteau (Cousteau, 1954:1–36).

In the more than 50 years that have elapsed, the exponential growth of underwater-exploration technology and the number of people using it has led to the discovery of so many underwater sites, primarily shipwrecks, that it is difficult to keep track of them. Every year, from all over the world, come reports of a few major discoveries and scores or hundreds of less-notable ones. We live in exciting times, indeed. But how long will they last? The resource is not inexhaustible. As early as 1953, Philippe Diolé (1953:218) wrote, "Unfortunately, we shall soon have to think about protecting the sea bed. Already some people are afraid of the ancient wrecks off our coasts being over visited by ignorant rather than ill-intentioned divers."

More often than not, underwater sites are considered to be fair game for commercial treasure salvage, even when similar sites on land have long been recognized as something governments should hold in common for their citizens if not for all humankind. In the past, a shipwreck site's principal

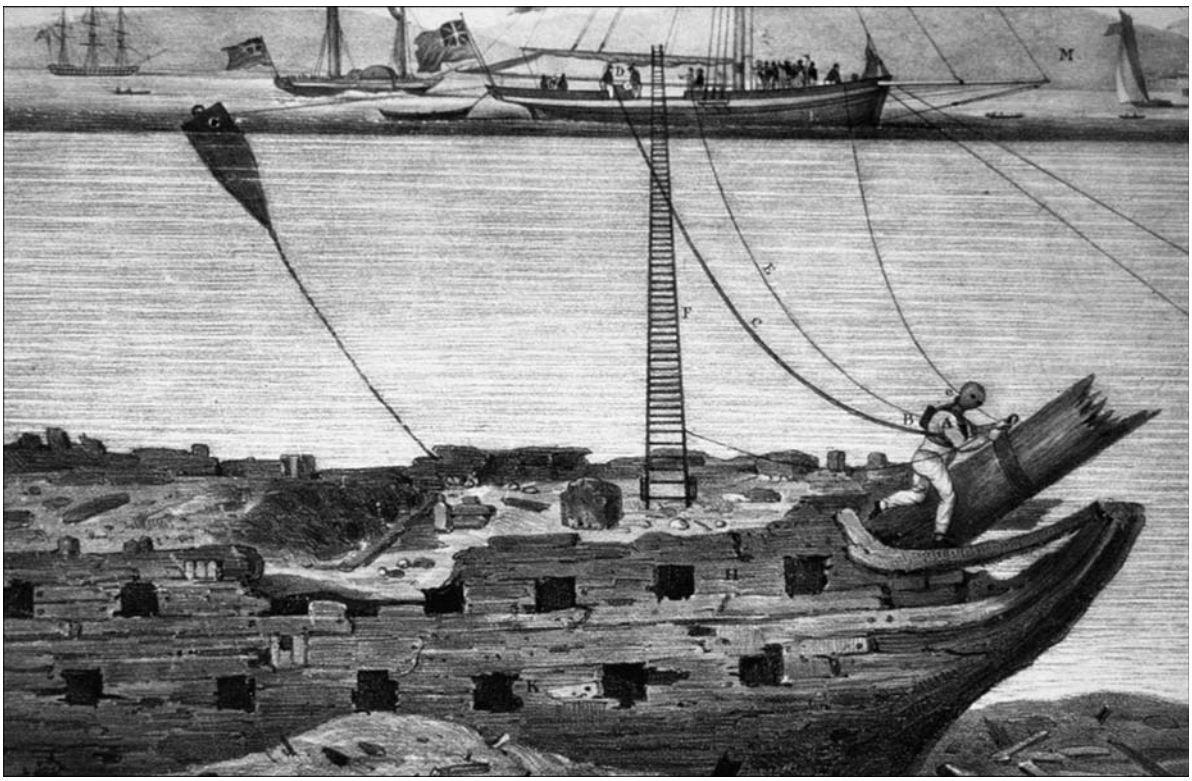

Fig. 1 A nineteenth-century painting of a helmet diver engaged in salvaging the *Royal George* at Spithead, England, in 1836 (courtesy Southsea Castle Museum, Portsmouth, England)

protection was its inaccessibility, but such improvements in remote-sensing technology as sensitive cesium magnetometers and high-resolution, side-scanning sonar and in navigation technology such as universal access to the global positioning system, have penetrated even the deepest, darkest, most-remote corners of the underwater world. Underwater sites have no real protection against human intervention in most parts of the world, and archaeologists are usually either ambivalent or, knowing what opposition to exploitative schemes will cost them in time and resources, hesitant to speak up. Meanwhile, the methods and techniques for the conservation of finds from underwater sites have remained difficult, labor intensive, and costly—facts that doom most artifacts from underwater sites to inadequate treatment, or none at all. And so it comes as no surprise that today, 54 years after Diolé's prescient observation, the shipwreck resource is showing serious signs of depletion.

Ownership of underwater sites is usually more at issue than is ownership of terrestrial sites, perhaps as a consequence of the fact that laws and regulations governing maritime affairs and waterways predate the awareness that those bodies may cover potentially important archaeological sites. The manner in which shipwrecks are perceived and valued differs from group to group: treasure hunters see them as a source of marketable valuables, curio seekers just want to take a memento or two, developers try not to see them at all lest they cause potential delays in construction schedules, engineers seek to eradicate them with dredging and clearing to keep waterways navigable, cultural resource managers try to keep them just the way they are, and archaeologists covet them as precious time capsules filled with invaluable information about our collective past.

These perceptions are obviously in conflict, although each is perfectly understandable when viewed only from one perspective. Although it is not controversial what to do with sites of great national appeal, such as Sweden's *Vasa* (1628), or undeniable historical significance, such as the CSS *Alabama* (1864), or importance as a national shrine, such as the USS *Arizona* (1941), these represent a small minority of the sum total of shipwreck sites. Attempts to apportion the majority of the resource usually involve legal actions that seek to prove that a site is "in peril" or that a particular party has the "right" to claim it, rather than who will put the resource to its best use. It would seem that a critical first step before continuing to write drafts on our underwater resources is to determine the total amount held in our account, what has been withdrawn and spent, and what remains in balance.

Evaluating the Resource

Of what does the resource consist? Following Lyell's lead, an expanded definition of "monuments to the skill and industry of man" should include shipwrecks and abandonment, casual losses, intentional deposits, jettisons, and inundated terrestrial sites. All should be included in the definition, but ships are by far the most distinct, familiar, and numerous of these site types, and they constitute the largest part of the resource. For this reason, and in order to avoid confusion, we have narrowed the subject of this chapter to focus on the "shipwreck resource." If we can create a means for quantifying shipwreck sites as a finite resource we can perhaps apply the same technique to other subsets of the universe of underwater site types. Temporally, the resource extends from humankind's earliest maritime losses to 1952, the beginning of the Age of Underwater Exploitation. Losses occurring since then are too modern to be considered archaeological, indeed many authorities would not include sites created as recently as World War II, and heavy exploitation did not begin until after the widespread use of the Aqua Lung.

Estimating the Size of the Resource

In the past, attempts to estimate the size of the resource have been more deductive than factual, even when proffered by professional nautical archaeologists: If only one ship per year sank in the Mediterranean Sea, and if we estimate the beginning of seafaring at 10,000 years ago, that would mean at least 10,000 shipwrecks in the Mediterranean alone. Those who have a vested interest

in finding and salvaging shipwrecks for business purposes are even more generous in their estimates of the wealth of the underwater repository. Attempts to actually quantify and inventory known shipwreck sites are generally regional and only a handful exist at this time (Table 1).

A U.S. State Department attorney recently observed that the legal perspective on submerged cultural resources globally is to treat them like mineral resources—offshore oil and gas deposits—when in reality it would be much more appropriate to see them in the same light as an ever-diminishing

Table 1 Inventory of Sites by Management Agency

Agency	Source	Area of Coverage	Date Range	Records (n)	Discovered sites (n)	Ratio
Parks Canada (PC)	PC Shipwreck Database	Canadian territorial waters	1527–1986	9,143	N/A	N/A
Nova Scotia (NS) Museum	NS Shipwreck Database	NS provincial waters, Canada	1583–1952	4,600	168	28.7
U.S. Minerals Management Service (MMS)	Tornfelt and Burwell (1992)	Alaska (USA) state waters, including Outer Continental Shelf (OCS)	1750–1937	1,082	N/A	N/A
MMS	MMS Shipwreck Database	Pacific OCS	1540–1952	4,802	N/A	N/A
MMS	MMS Shipwreck Database	Gulf of Mexico OCS	1625–1952	1,002	N/A	N/A
MMS	MMS Shipwreck Database	Atlantic OCS	1520–1976	3,174	N/A	N/A
Florida Department of Archives and History	Florida Shipwreck Database	Florida state waters, USA	1513–1945	1,348	226	6.0
U.S. Department of the Interior National Park Service, Submerged Cultural Resources Unit	Carrell (1991)	Micronesia and U.S. Trust Territorial waters	1520–1946	881	160	5.5
Archaeology Diving Unit, St. Andrews University, Scotland	RCHME National Inventory of Maritime Archaeology (1996)	British territorial waters	1200–1945	30,000	5,700	5.3
Australian Department of the Environment	Commonwealth Government of Australia (n.d.)	Australian territorial waters	1600–1952	5,998	736	8.1
Northern Ireland Department of Environment and Heritage	Northern Ireland National Database	Northern Ireland territorial waters	1740–1945	3,000	200	15.0
South African National Monuments Council	National Monuments Council Database	South African territorial waters	1505–1945	2,500	523	4.8
Lake Champlain Maritime Museum (LCMM)	LCMM shipwreck database	Lake Champlain and lakes in Vermont and New York, USA	1600–1952	300	N/A	N/A
Total				67,830	7,713	8.79

endangered marine species, such as whales. Carrying that analogy one step further, attempting to estimate the total number of sites in the underwater cultural resource bank is similar to the problem petroleum engineers have when trying to determine how much oil is left in known reserves and unproven new fields. While still providing only estimates, applying the methods of the oil industry to shipwrecks could yield a more reliable result than the kind of spotty local coverage that has characterized this type of effort in the past. More importantly, it is the one that can continue to be refined as more information becomes available.

For the purposes of this analysis, the shipwreck resource is considered to be nonrenewable. While it is true that ships continue to sink and objects continue to fall into the water without being retrieved, this does not constitute resource renewal. The total number of Phoenician warships, Medieval Cogs, ancient Chinese trading vessels, or Polynesian voyaging catamarans preserved beneath the sea is finite. Additionally, modern navigation, remote sensing, and diving technology make it possible to locate and salvage modern shipwrecks immediately, preventing them from becoming archaeological sites. Maintaining that the resource is being infinitely renewed is akin to saying that because *some* species of marine life will always exist, we need not be concerned about the fate of specifically exploited, ever-diminishing species of whales, cod, or tuna. Borrowing a concept from the oil industry, in order to determine the size of the recoverable shipwreck resource, and how many shipwreck sites will be "recovered" when "production" ceases sometime in our future, there are three numbers that must be obtained:

(1) How much of the resource has been discovered and "extracted" to date?
(2) An estimate of what part of the resource has been discovered but remains "in reserve," and
(3) How much of the resource remains to be discovered (Fig. 2)?

Fig. 2 In order to determine the size of the shipwreck resource, estimates are required for what has been discovered, what has been extracted, and how much remains (courtesy Ships of Discovery, Corpus Christi, Texas)

How Large Is the Recoverable Resource?

How much has been extracted to date? This includes the total number of sites that have been discovered and excavated or salvaged completely or otherwise "consumed." High-profile examples of sites in this category include *Mary Rose* (1545), *Nuestra Señora de Atocha* (1622), VOC *Batavia* (1629), *La Belle* (1686), *Whydah Galley* (1717), *DeBraak* (1798), and *H.L. Hunley* (1864). Part of this total, the sites that are reported, can be derived fairly accurately from a thorough review of the literature. The rest consists of consumed sites that were unpublished or exploited and destroyed before it was a common practice to announce such discoveries.

How can we estimate reserves? This number is composed of those sites that have been discovered but left completely or largely in pristine condition (Fig. 3). High-profile examples of sites in this category include *Hamilton* and *Scourge* (both 1813), VOC *Amsterdam* (1749), and *Breadalbane* (1853), but low-profile examples are much more numerous. Here again, reliable figures are available for a portion of the sites; in the authors' experience, it is reasonable to assume that many more exist in the "unreported" category. "Unreported" does not mean "undiscovered." Many well-known shipwreck sites (e.g., HMS *Endymion* on the Turks Island Bank) are in the unreported category by virtue of the fact that they have never attracted the attention of resource managers or archaeologists and therefore do not appear in any published inventory (e.g., HMS *Endymion*).

What remains to be discovered? This represents all underwater sites created from the dawn of time to 1952, minus those that have been discovered. Faced with the prospect of assigning a value to this number, most historians and archaeologists throw up their hands in despair. How can anyone

Fig. 3 Some of the best examples of the extent to which deep, cold freshwater can preserve shipwrecks are the *Hamilton* and *Scourge* (1813), lying in water about 300 feet deep in Lake Ontario. The figurehead is from USS *Scourge* (formerly *Lord Nelson*) (courtesy Hamilton and Scourge National Historic Site, Hamilton, Ontario, Canada)

guess how many Greek triremes, Spanish galleons, English men-of-war, Dutch East Indiamen, and Japanese fishing boats are on the bottom of the sea? While it may not be possible to estimate the total number of ship losses throughout time worldwide, it is important to differentiate between ship losses and actual sites created, because only a fraction of shipwrecks become archaeological sites. Many ships that wrecked in shallow waters were thoroughly salvaged in antiquity. Others were so scattered and fragmented that they ceased to have any lingering value as archaeological sites. As Muckelroy (1978:150) correctly observed, a wooden sailing ship sinks only when dragged down by the weight of its ballast or cargo. Ships that disintegrated on the high seas during severe storms or naval engagement are likely to never actually reach the seabed.

Some authorities have sought to arrive at estimates for the total number of ship losses at sea for specific areas or periods of time. Charles Hocking's *Dictionary of Disasters at Sea* (1969) surveys Lloyd's Register of Shipping to determine that approximately 12,542 sailing ships and ships of war were lost from 1824 to 1962. The monumental work of Hugette and Pierre Chaunu (1955–1957), *Seville et l'Atlantique*, tallies 519 ships lost between 1500 and 1650 while sailing from or to Seville. Like

the Chaunus' work, Alberto Tenenti's *Naufrages, corsaires et assurances maritimes a Venise, 1592–1609* (Tenenti, 1959) counts 1,021 ships lost while sailing from or to Venice during an 18-year period. David Barron's (2002) *Northern Shipwrecks Database* contains 65,000 ship loss records for North America, including the Great Lakes and inland waterways, from A.D. 1500 to the present.

While records like these are interesting, most are not directly comparable or immediately applicable to this study because they do not define the subject of interest in the same way. For instance, some inventories count every floating device more than 15 feet in length, while others consider only registered vessels of a certain nationality. Additionally, as they do not report all losses but only those that were insured or involved in commerce with certain ports, there is no way to expand the total number to include all shipping in that area at that time. Finally, the multitude of ways in which a potential shipwreck site can be described in historical reports—"total loss, wrecked, foundered, broken up, lost, sank, stranded, abandoned, burnt, capsized, went ashore, cast away, collision, missing, unknown"—makes it impossible to reduce the total number of losses to just those resulting in the creation of archaeological sites.

Applying the Hubbert Model

Given the problems of estimating the total number of shipwreck sites based solely on loss records, the authors turned to methods used by the petroleum industry to make a similar estimate: How much oil remains to be discovered? Rather than trying to calculate how much oil is in the earth based on how it was created eons ago, exploration geologists look at the behavior of the fields they have already located. They are concerned not with how the resource was created, but with how much of it can be extracted. The volume of oil that they have already found and extracted is the best indicator of what remains. The number of underwater sites that has been discovered and extracted may be sufficient to allow us to approximate how much is left—even without knowing in advance the total number of ships lost.

Geologists can accurately estimate how much petroleum remains in a region by gauging the decline of aging fields (Campbell and Laherrère, 1998:78–83). Oil production in a region starts to fail when about half of its crude is exhausted. Plotting output over time produces a bell-shaped curve that allows geologists to predict how much of the resource remains (Fig. 4). When production begins to fall, the "Hubbert Model" predicts that half of the available resource in that field has been consumed (Deffeyes, 2001:3). If the shipwrecks in an area can be likened to oil fields and their discovery dates can be plotted against "production," the same principles may apply.

The patterns exhibited by exploration geologists and those who search for shipwrecks are essentially the same: the best and most easily extracted sites are discovered and exploited first. The first oil wells were drilled in localities in Pennsylvania and Wyoming where deposits were so close to the surface that they actually seeped out onto the ground. Similarly, "coin beaches" in Florida and Texas signaled the presence of easily accessible shipwrecks close to shore, sparking commercial treasure-salvage projects. With the passage of time, sites become progressively more difficult and costly to find—and less productive. Plotting the effort expended to find new sites against the productivity of the sites discovered through time yields an indication of the relative abundance of the resource. High productivity in return for low investment indicates abundance. Low productivity in return for high investment indicates a dwindling resource. That oil companies are regularly exploring and attempting to exploit ever deeper and more-difficult fields is a good example of this inverse relationship. As recently as March 15, 2007, Robert Routs, executive director for Oil Products, Royal Dutch Shell, stated in an interview on National Public Radio: "We tend to say to our investors that easy oil is over. Now we have to go to 10,000 feet of water to find oil, we have to go into oil sands [and] oil shales, so the battle to replace the oil that was there is not getting any easier." While Routs is not predicting the end of oil availability, he is acknowledging its overall decline, even in previously inaccessible fields.

So is there a vault in the underwater bank we have not yet sampled and whose contents are unknown to us? Estimates of how much petroleum remains undiscovered in the earth are revised upward when new fields are discovered or new technology allows more to be recovered from existing fields. While the techniques for extracting more information from shipwrecks

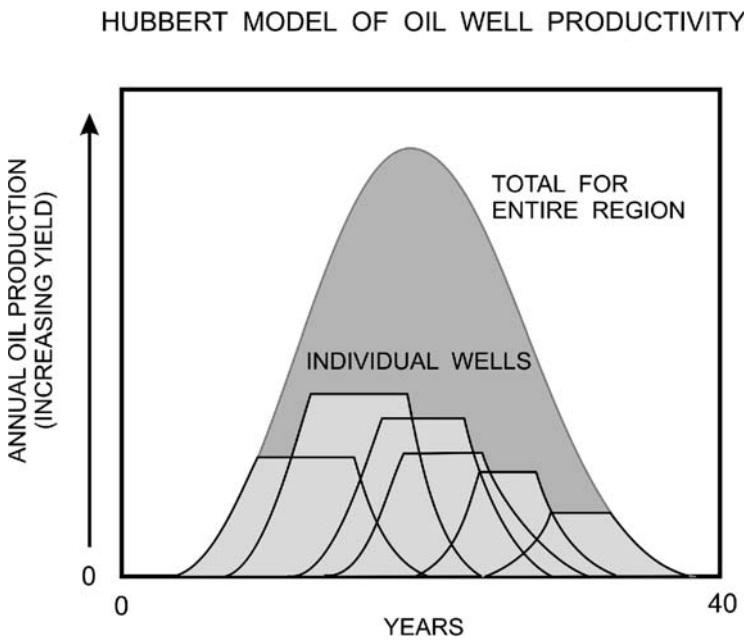

Fig. 4 An example of a Hubbert Model curve plotting annual oil production over time for a large region. The short, *flat-topped curves* indicate the production of individual wells. The tall, *bell-shaped curve* represents the combined production of all the individual wells. In 1956, M. King Hubbert used this relationship to correctly predict that oil in the contiguous 48 United States would decline after about 1969 (after Campbell and Laherrère, 1998:80) (courtesy Ships of Discovery, Corpus Christi, Texas)

have remained relatively static, the search for and recovery of shipwrecks in the deep ocean frontier promises to gain access to a considerable volume of quality sites which have hitherto been inaccessible, thus expanding the size of the available resource. Optimists have predicted that the deep ocean floor is littered with thousands of well-preserved shipwrecks of every type and date. However, judging from the remains of *Titanic* (1912), *Central America* (1857), and the *Isis* wreck (last quarter of the fourth century B.C.), it now seems that initial predictions of the state of preservation of deepwater wrecks were overly optimistic but, at least until recently, they had not yet suffered from disturbance by humans. It is clear that this resource, just as deepwater oil, has its limits.

Toward a More Accurate Estimate of the Size of the Resource

While it is beyond the scope of this chapter to determine with any acceptable degree of precision what portion of the global total of shipwreck sites have been consumed and what portion remains, it is possible to demonstrate a method for making that determination.

In order to apply the Hubbert Model, it is necessary to have reliable statistics for the number of shipwreck sites discovered in a particular area over a certain period of time. To derive an estimate for the global status of the resource, we would need to know how many sites have been discovered worldwide, when they were discovered, and how many of those sites have been completely "used up." While it is probably possible to do this, it would require the cooperation of scores or hundreds of archaeologists and resource managers and is beyond the scope of the present endeavor. By way of example, Table 1 is a compilation of shipwreck information from 10 premier agencies of various types in different countries showing the relationship between the number of records of ship losses and the number of sites discovered. In this sample, 7 of the 10 have useful statistics for the number of sites discovered in the areas for which they are responsible. Of those, only two were able to provide us with the dates on which the sites were discovered or reported.

How Many Sites Have Been Discovered?

How many shipwreck sites have been discovered globally? In 1999, the authors conducted a review (unpublished) of widely available references to shipwrecks, maritime history, and nautical archaeology in an effort to answer this question. Perusal of the following major references: *A History of Seafaring Based on Underwater Archaeology* (Bass, 1972), *Archaeology under Water* (Muckelroy, 1980), *The Sea Remembers* (Throckmorton, 1987), *Ships and Shipwrecks in the Americas* (Bass, 1988), *Ancient Shipwrecks of Mediterranean and Roman Provinces* (Parker, 1992), the *International Journal of Nautical Archaeology* (Nautical Archaeology Society, 1972–present), and the British Museum's *Encyclopedia of Underwater and Maritime Archaeology* (Delgado, 1997), among others, produced a large, reliable, global inventory of reported shipwreck sites that possess at least the minimum requirements for archaeological significance. The combined total of discoveries from these sources is about 2,600 shipwreck sites. To this can be added, when corrected for redundant records, the approximately 7,700 sites reported to government agencies responsible for shipwreck inventories and management, such as those listed in Table 1. While such a sum is in no way comprehensive, it is of the right order of magnitude. It should be noted that authors are aware of several small-scale, locally specific compilations of shipwrecks not included here and at least one recent analysis of shipwrecks already in the Australian National Shipwreck Database (Richards, 2002). The authors also did some limited research on shipwreck discoveries in an effort to update their 1999 study; however, these additional records do not meaningfully alter the totals reported in Table 1. Based on the combined data available, a minimum of 10,300 shipwreck sites have been discovered and reported worldwide. The authors further recognize that if figures from Scandinavia, the rest of Europe, and the rest of the world were added, the global total would be much greater. Still, for purposes of this analysis, the figure of 10,300 represents a reasonable statistical sample.

How Many Sites Have Been Extracted?

But how many of these discovered and reported sites have been "extracted"? While it is clear that extracted sites would include shipwrecks that have been raised intact, such as *Philadelphia* (1776) (Hagglund, 1949), or piece-by-piece, such as *La Belle* (1686), sites that have been heavily salvaged and badly disrupted over long periods of time, such as *Nuestra Señora de la Concepción* [Silver Shoals] (1641) (Earle, 1980), also should be included (Fig. 5). Therefore, for the purposes of this analysis, a site is considered to be "extracted" if it has been completely removed from the seabed or has been so thoroughly salvaged or excavated that it is unlikely to provide any additional useful archaeological information in the foreseeable future.

Sampling the widely published sites for which there is adequate information, and applying the criteria as objectively as possible, only about 10 percent of discovered-and-reported shipwreck sites have been extracted (Fig. 6). Examples of sites we place in this category are *Arabia* (1856), which has been completely excavated, conserved, and moved to a museum (Hawley, 1995); and the "Cabin wreck" (1715), parts of which still may be found on the seabed even after three decades of sporadic treasure hunting. Extrapolating this proportion to the previously determined number of reported shipwreck sites (about 10,300), one arrives at a minimum of 1,030 sites that have been extracted. Again, the global total would be much greater.

Recognizing that not all discovered sites have been reported, how can we estimate how many *unreported* shipwreck sites have been extracted? However difficult and unusual it is to find shipwreck sites, it is even more difficult to keep their discovery secret. Typically, discoverers want to share their excitement with others. In the course of conducting research on diagnostic artifacts or on vessel identity, word of the discovery spreads, and it is virtually impossible to keep the location of the site or what is being recovered secret when full-scale salvage efforts are initiated. For these reasons, we predict that the number of unreported, extracted shipwreck sites since 1952 is quite small and probably statistically insignificant.

How Many Sites Are in Reserve?

On the order of 90 percent of the remainder of discovered shipwreck sites can securely be classified as "in reserve," that is, retaining all or part of their archaeological potential and historical significance.

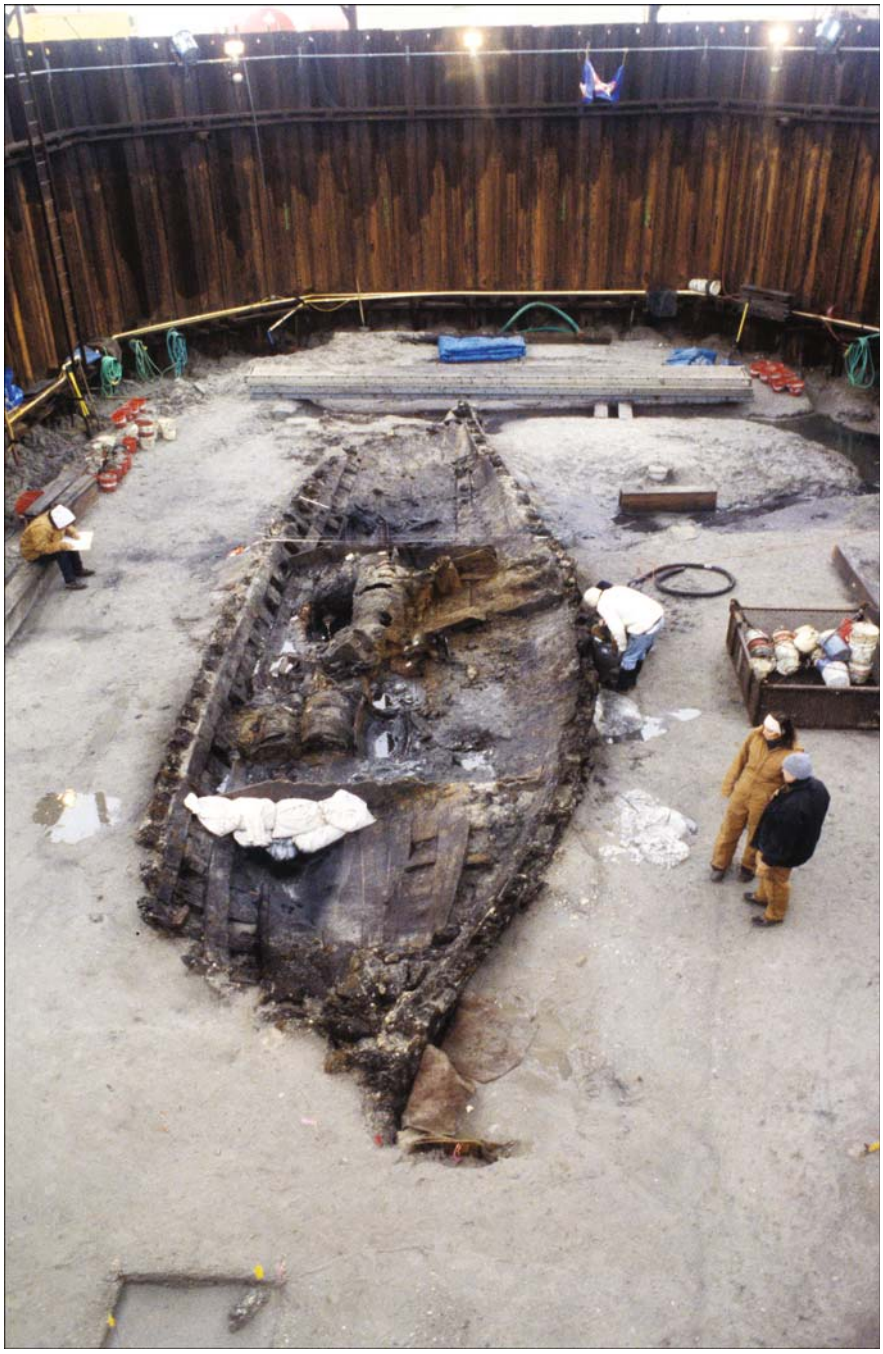

Fig. 5 The Texas Historical Commission's excavation of *La Belle* (1686) on the bottom of Matagorda Bay was facilitated by the construction of a cofferdam around the site (courtesy Toni L. Carrell)

Using the same statistics cited above for Australia, North America, England, and the American Pacific Trust Territories, this number is about 9,270 sites. Again, the global total will be a multiple of this figure.

How Many Sites Remain to Be Discovered?

Techniques borrowed from the petroleum industry may provide a more meaningful statistic for the

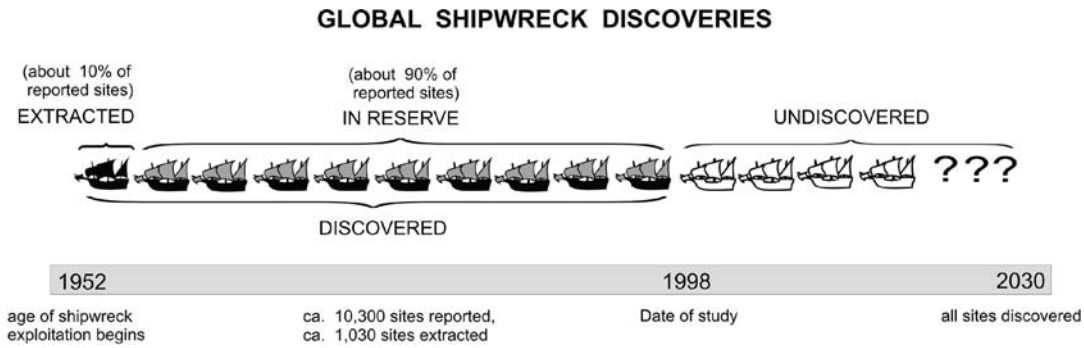

Fig. 6 The total recoverable shipwreck resource may be divided into "discovered" and "undiscovered" categories. Of the sites that have been discovered, only about 10 percent have been "extracted." The remaining 90 percent are still "in reserve" (courtesy Ships of Discovery, Corpus Christi, Texas)

number of shipwreck sites remaining to be discovered, but first it is necessary to sort the records for those sites already located and reported according to when they were discovered or when they were extracted—whichever more accurately represents when activity on them peaked. The proportion of the recoverable resource remaining to be discovered in any particular area or globally may be predicted by plotting the dates on which the sites that have already been "extracted" or are "in reserve" were discovered. When the rate of discovery peaks, half of the recoverable resource has been discovered. Here, available records are of little use. Date of discovery and history of interest shown in a site, information which corresponds to an oil well's "production" over time, is seldom entered in shipwreck-site databases. However, it is possible to plot three small-scale data sets for which dates of discovery are available: all shipwreck sites in the state of Florida, all published East Indiamen wrecks between 1960 and the present, and all shipwreck sites in Sussex County, England.

The Florida Example

Although a few wreck sites were found earlier, the exploitation of shipwrecks in Florida began in the late 1950s. The first sites discovered were from a Spanish fleet of 11 ships which wrecked on the east coast in 1715 and another fleet of about 20 ships that wrecked in 1733 in the Florida Keys (Fig. 7). Shipwreck discovery and recovery activity peaked in the 1970s, tapered off until the discovery of *Nuestra Señora de Atocha* in 1985, rose slightly in the hysteria that ensued, and finally resumed a steady downward trend. (The spike in 1991 resulted from a unique state-sponsored survey of Pensacola Bay.) While the number of sites is relatively small, and the length of time short, the history of shipwreck discovery in Florida indicates that most of the sites that exist have been found and that the resource is in decline. If the Hubbert Model is applicable, the number of sites that have been found (226 according to Department of Archives and History figures) exceeds the number yet to be discovered.

The East Indiaman Example

Using information compiled by Jeremy Green (Green, 1987:168–170) and others (Larn, 1990; Redknap and Smith, 1990) for 53 East Indiamen of various nationalities, the sites of which were located along the route from Europe to the East Indies, it is possible to plot the dates of discovery (or major activity) for each site from about 1960 to 2004 (Fig. 8). The graph rises slowly until 1969, with the occasional discovery of up to two sites per year. It peaks around 1972 with the discovery of five sites, returns to normal levels in 1977 with one to two discoveries per year before peaking briefly again in 1985 with the discovery of five sites, then returning to single discoveries. The 1992 discovery of three sites was the result of a survey in Galle, Sri Lanka, under an agreement with the Western Australia Maritime Museum and the government. After 1992, the rate returned to single discoveries. It should be noted that curve is now exhibiting a long "tail" with only intermittent discoveries, and

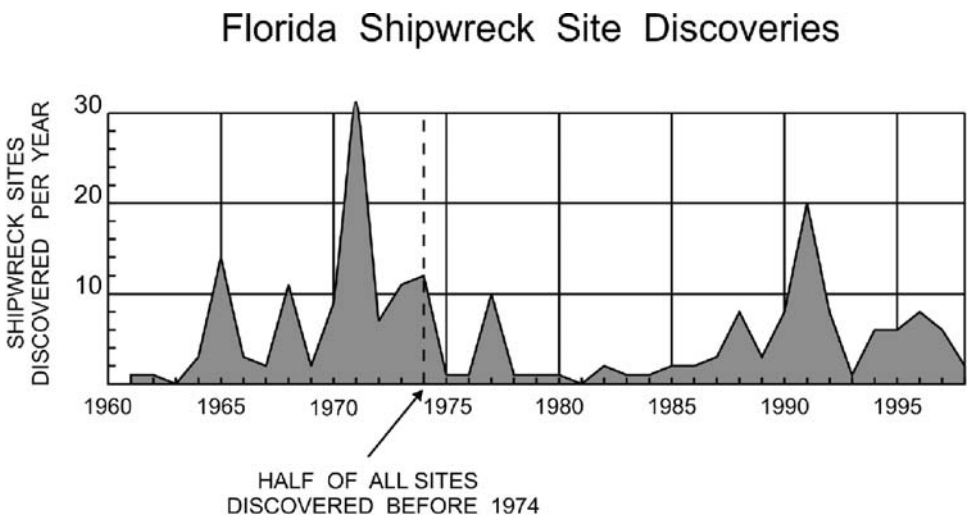

Fig. 7 A graph of the rate of discovery of shipwreck sites in Florida shows that discoveries climbed through the 1960s, peaked in the early 1970s, declined until the mid-1980s, rose again in the late 1980s, and has remained fairly constant throughout the 1990s. The sharp peak in 1991 was produced by a unique, very thorough state-sponsored survey of Pensacola Bay (courtesy Ships of Discovery, Corpus Christi, Texas)

as of 2007 no new discoveries had been made. This is a strong indication that the number of sites is dwindling. In this case we are plotting site investigations over time for a shipping route, rather than a specific area. Even though the sites are distributed from Europe to Australia, the pattern seems to be remarkably similar to the one observed for Florida (note that in both cases half the sites were discovered by 1974), and it is tempting to speculate that it may be more or less universal. If this is the case, the curve seen in Fig. 8 seems to indicate that more than half the total number of East Indiamen shipwreck sites ever created were found between 1960 and 1974.

The Sussex County Example

The United Kingdom database of known wrecks contains more than 30,000 records. Due to the size

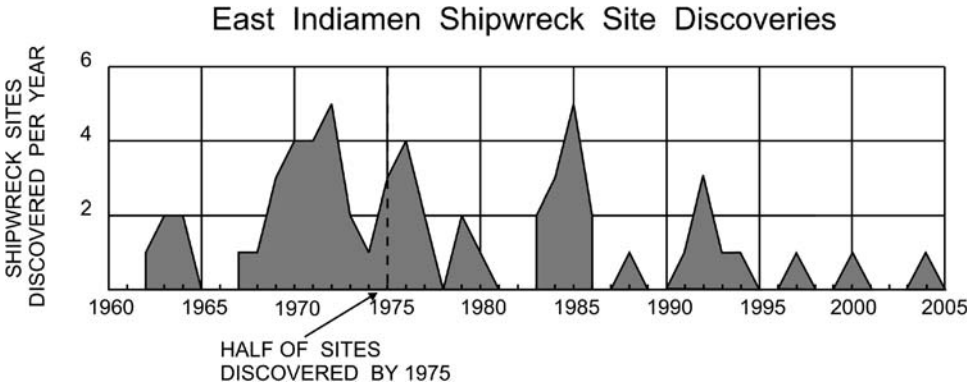

Fig. 8 A graph of the discovery of East Indiamen since 1960 shows that the rate accelerated throughout the 1960s and peaked in the mid-1970s. Half of the sites discovered between 1960 and 2004 were located by 1975. The peak in 1992 was produced by a survey of Galle Harbor by the Western Australia Maritime Museum and the government of Sri Lanka (courtesy Ships of Discovery, Corpus Christi, Texas)

of the database, we examined a subset of 244 known sites of archaeological interest plotted for Sussex County by the Royal Commission on the Historical Monuments of England (1996). Between 1940, when records collection began, and 1959, only an occasional site was discovered (Fig. 9). In 1965, there is a small peak with the discovery of 12 sites; it then drops back to one or two sites a year until 1974–1977 when a total of 138 sites was discovered. The curve dips in 1978, peaks again briefly in 1980, and then drops back to two or three sites per year until the present. The pattern exhibited by this subset is startlingly similar to that of both Florida and the East Indiamen. Half of all known sites were discovered before 1976. The resource now appears to be in decline.

Although this sort of analysis is far from definitive, it is tempting to speculate that the curves seen in Figs. 7, 8, and 9 may indicate a global pattern in the rate of shipwreck discovery and investigation that last peaked more than three decades ago and is now in decline. There are indications that the number of sites remaining to be discovered is smaller than the number already reported. Just as we will never truly "run out" of oil, we will never "run out" of shipwrecks. However, the world can run out of significant shipwrecks the same way that it is already running out of cheap oil. If this is the case, and the rate at which sites are being discovered continues at the present pace, the world will "run out" of significant shipwrecks in about four decades.

Factors Affecting Interpretation

What factors could be influencing these patterns and causing us to draw the wrong conclusions? Are there fewer commercial treasure hunters now than in the past? Are permitting restrictions greater than before? Perhaps sites are still being discovered at the same rate, but not being reported. Or perhaps our figures, taken from statistics not specifically designed to support this type of research, are drastically in error. While they are the best figures available, they are admittedly imprecise; but they could be sharpened considerably if existing records were correlated in a

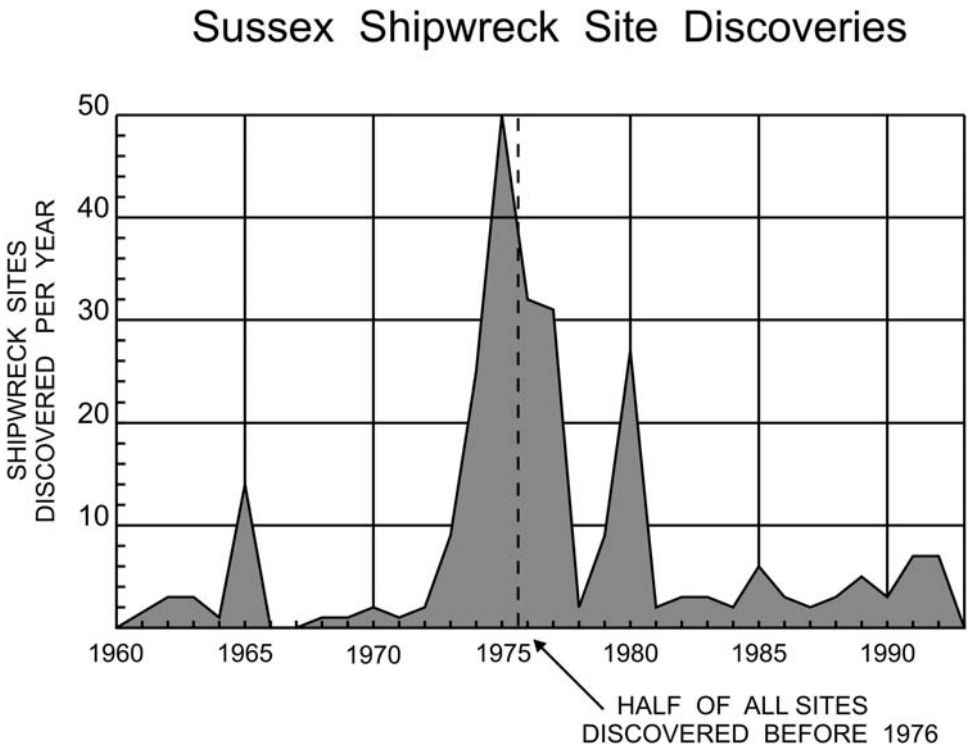

Fig. 9 A graph of the rate of discovery of shipwrecks for Sussex County, Great Britain, shows that half of all sites discovered between 1960 and 1998 were discovered by 1976 (courtesy Ships of Discovery, Corpus Christi, Texas)

slightly different manner. There is good reason to believe that there are more groups interested in locating and using shipwrecks now that ever before; certainly the remote-sensing equipment used to find sites is much more widely available and affordable than it was in the past. Whereas most treasure-hunting groups in the past were based in first-world countries where the necessary technology and expertise was available, today they are global in distribution, frequently clustering in areas where there is an offshore oil industry requiring divers and underwater inspection equipment. Improvements in remotely operated vehicle (ROV) technology have pushed the frontier of exploration into deep, cold, dangerous waters previously off limits to divers and even submersibles.

If shipwreck sites are still being discovered at the same rate as in the past, but not being reported, it is more likely because the discoverers do not think the sites worthy of reporting than out of desire to keep them secret. Archaeological sites are not all created equal. The fraction of the total number of sites already discovered undoubtedly includes a higher proportion of the "best" sites—the largest, the most famous, the best preserved, and certainly the richest. Although many of these have been "extracted," such as *Geldermalsen* (1752), *San Diego* (1600), the Lake Nemi barges (first century A.D.), and the Sinan-gun ship (ca. 1332), the greater part remains "in reserve," such as *Breadalbane* (1853), *Dartmouth* (1690), and the Lake Garda ships (1509).

Regardless of which method is used to reconcile our account, to determine how much of it has been withdrawn and how much remains, it is apparent that we have spent a significant fraction, most of it during the last 40 years. It is also clear that the global rate of consumption is increasing given the many reports of shipwreck discoveries appearing in developing countries and widely circulated on the Internet. What have we learned from shipwreck sites? How well and efficiently have we used them? Are we handling the resource more wisely now, or continuing to make the same mistakes?

How Wisely Have We Used the Resource?

There are many ways to "rate" how well we have used the shipwreck resource. The best would be to evaluate each one separately according to the same criteria. A more manageable approach for the present, however, is to examine the overall health of our archaeological account, to examine how we have profited and what has been the cost.

Ship Construction

One artifact category almost all shipwreck sites have in common is the ship itself. Certainly the study of the evolution of ship construction based on evidence provided by shipwrecks continues to be the glue that holds "marine," "maritime," and "nautical" archaeology together. Shipwreck investigations that ignore a vessel's hull or fail to document it as thoroughly as possible are deficient. On a global scale, the study of the wooden hulls of shipwrecks have revealed the coexistence through time of several distinctly different ship-building and ship-design traditions usually characteristic of specific areas and associated with specific cultures.

One of the most distinct, remarkable traditions of ship construction evolved in Scandinavia. The classic Viking ship of A.D. 800–1000 represents its striking penultimate manifestation, and its familiarity is a direct result of archaeological discoveries dating back to the nineteenth century. While the best information about this ship type comes from boat burials on dry land, underwater finds at such places as Skuldelev (eleventh century A.D.) have demonstrated the morphological variety that existed within the tradition. Always single-masted and undecked, Viking ships could be rowed or sailed and were marvelously well adapted to their environment. The hulls were made of carefully carved oak planks overlapped and riveted together in the classic "lap-strake" method of construction. In time, the classic Viking ship became extinct, but not before passing many of its most salient features on to such successors as the Cog and the Hulk. The Cog ship type, despite its importance to Medieval trade and history, remained a mystery until a well-preserved fourteenth-century example was discovered in the harbor of Bremen, Germany. Complete excavation, conservation, analysis, and reconstruction of the Bremen Cog (ca. 1380) has revealed its secrets in enormous detail—including what tools were used to build it, how the ship's toilet was constructed, and where it was located (Lahn, 1992).

A different tradition evolved in the Mediterranean Sea. The well-preserved hull of a fourth-century B.C. Greek ship found off Kyrenia, Cypress, revealed the existence of a tradition of shipbuilding in which the hull planks were carefully and laboriously shaped and fastened together edge to edge with thousands of mortise-and-tenon joints (Steffy, 1994:42–59). Only after the shape of the hull was fully defined were frames cut and fitted to the ship's interior. Dozens of similarly made hulls dating from the Greek and Roman periods make it clear that this "shell-first" tradition was predominant in the Mediterranean for centuries, if not millennia.

It is difficult to characterize a single Chinese seafaring tradition owing to the size of the country, the wide variety of environments, and the dearth of reports of archaeological discoveries. However, there are at least two impressive archaeological examples that predate sustained maritime contact with the west. A well-preserved thirteenth-century A.D. trading ship found in the harbor of the modern city of Quanzhou (Marco Polo's Zaiton), indicates that seafaring ships on the central coast of China were large, multimasted, V-bottomed, and had sharp bows (Fig. 10). The interior of the hull was divided into compartments by thick transverse bulkheads, and its double- and triple-planked hull was intricately joined using a unique "rebated clinker" technique (Keith and Buys, 1981). An impressive example of a somewhat different Chinese ship construction tradition is the fourteenth-century wreck discovered at Sinan-gun, South Korea (Fig. 11), which shared many salient characteristics with the Quanzhou ship (Keith, 1980).

Polynesians, Micronesians, and Melanesians used variations of the multihulled sailing vessel to conquer vast distances in the Pacific, the largest ocean in the world, with only a Stone Age technology. This, the Oceanic Tradition, is comprised of a wide variety of small, single- and double-outrigger sailing canoes; and big, Polynesian, twin-hulled voyaging catamarans capable of carrying 50 or more people (Haddon and Hornell, 1975).

It is interesting to note that when the evolution of a particular shipbuilding tradition is traced back to its origins, the manner in which the hull planks are

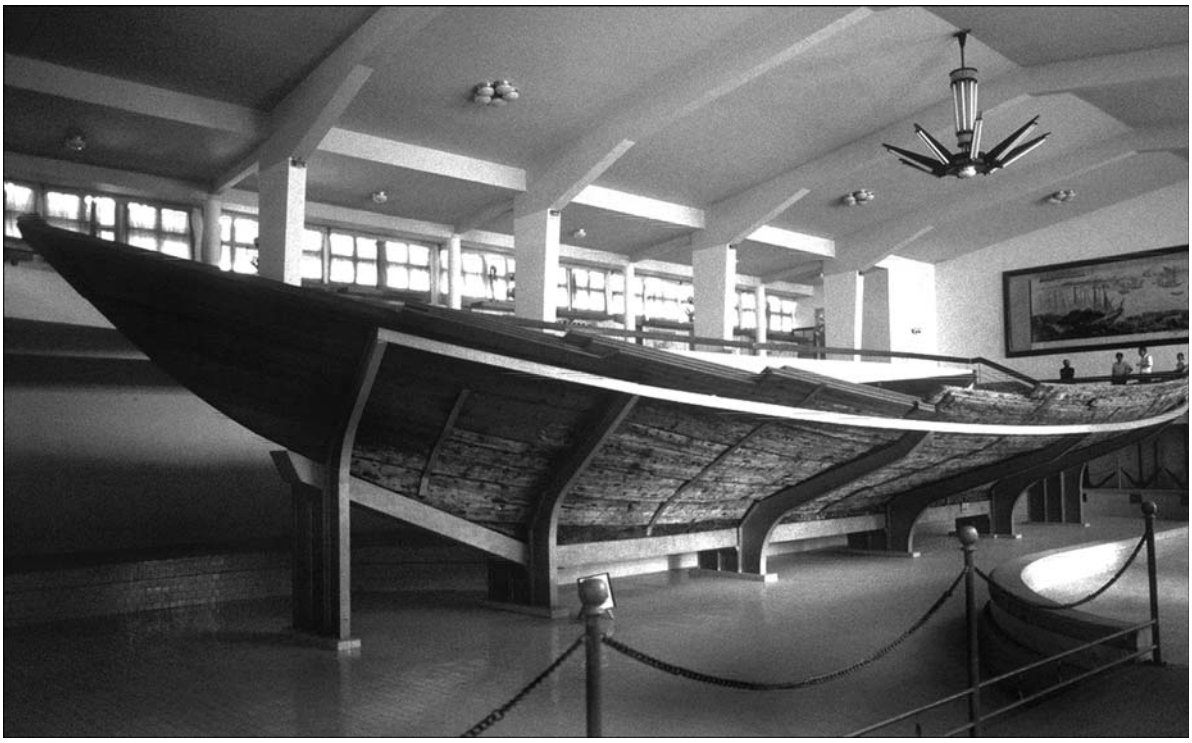

Fig. 10 A special museum was built to house the unique, well-preserved lower hull of an enormous twelfth-century Chinese shipwreck found near Quanzhou, Fujian, China (courtesy Donald H. Keith)

Fig. 11 An example of the high degree of preservation of the cargo and hull remains of the fourteenth-century Chinese trading vessel excavated near Mok'Po, South Korea, are these wooden packing-crate panels, still bearing the original painted markings (courtesy Donald H. Keith)

fastened to each other and to the interior framework is quite often by lashing, or "sewing," rather than by nailing or using any other type of metal fastener. This, the nearly extinct "sewn boat" tradition, today ranges geographically from the east coast of Africa to the circum-Arctic region where the Umiak skin boat is made entirely from the bone, skin, and sinew of walruses. There is, however, substantial evidence that it was much more widespread in the past. Examples include the Cheops ship (Lipke, 1984), interred in a special tomb beneath the Great Pyramid ca. 2650 B.C.; the Ferriby boats (Wright, 1994), abandoned on the shore of the Humber river, England, in about 1300 B.C.; and the seagoing Bon-Porté ship, which sank near St. Tropez, on the Mediterranean coast of France, in about 525 B.C. (Joncheray, 1976).

Within broad shipbuilding traditions, specific techniques have been documented in recent years, including uses of the Atlantic design method in, among others, *Mary Rose* (1509) and *Sea Venture* (1609) (Adams, 2000). This involves the use of three tangential arcs to create the shape of the frames and is typified by hauling down the bilge arc to narrow the ship fore and aft. A slight modification of this is the Mediterranean design method first analyzed and described by Rieth (1996) and documented in *La Belle* (Carrell, 2003). This also involves the use of three arcs, but at the bilge the arc is modified by an outward tilt from a pivot point at the outer end of the floor. The study of sixteenth-century Biscayan wrecks from Red Bay (ca. 1565) has also revealed unexpected construction processes within the Atlantic design method. These types of analyses, which are continuing to refine the study of ship's hulls, are indicators of the maturity of these studies.

Maritime Artifacts

The furnishings, equipment, instruments, cargoes, weapons, and even human remains found on

shipwreck sites have given us a rich and intriguing picture of commerce, technology, and life aboard different types of ships at different times. Human remains found on *Mary Rose* revealed that at least some of the crew were quite tall, unlike the commonly held perception that "people were smaller back then." The barber-surgeon's chest containing ointments, unguents, surgical instruments, and a syringe comprises the earliest well-dated set of medical equipment for use at sea. That crewmen through the ages sought relief from boredom in games is well attested to by the presence of gaming boards and pieces. Chess and backgammon pieces were found on the Serçe Liman "glass wreck" (ca. A.D. 1025) (van Doorninck, 1997:369), and excavators found dice as well as boards for "nine men's morris," chess, backgammon, and an unidentified game on *Mary Rose* (Rule, 1982:198). The lid of a wooden crate from the Sinan wreck (ca. 1323) was inscribed with a "Go" board (Keith, 1980:35). Intact and fragmentary musical instruments have often been found when preservation is good: a tabor pipe and pieces of fiddles from *Mary Rose* (Rule, 1982:198–199), and a clarinet and other instruments from *Maple Leaf* (1864) (Holland et al., 1993:163). The diversity and preservation of artifacts in shipwreck sites is further demonstrated in *Artefacts from Wrecks: Dated Assemblages from the Late Middle Ages to the Industrial Revolution* (Redknap, 1997).

Some of the most remarkable finds in the history of archaeology have come from shipwreck sites. While the popular press never fails to trumpet the gleaming jewelry and stacks of silver ingots brought up by treasure hunters (Bowden, 1996; Lyon, 1982; Stenuit, 1978), shipwrecks of all periods have produced other artifacts having great value on an entirely different plane—objects that are unique, or virtually so, in the history of archaeology. The mechanical calculator (Fig. 12) found on the first-century B.C. Roman shipwreck at Antikythera, Greece, is a good example (de Solla Price, 1997). Nothing like it has been found before or since. It proves the existence in the ancient world of a sophisticated mechanical technology at least a 1000 years earlier than previously suspected.

The mid-sixteenth-century Spanish galleon *San Juan* (1565) produced not only the ship's carefully crafted magnetic compass, but also the binnacle box in which it was housed, a sandglass, and a log reel (Grenier, 1988:79). Together with three astrolabes recovered from two ships which sank off Padre Island, Texas, in 1554, these are the most reliably dated and provenanced sixteenth-century navigator's instruments in the world.

When excavators penetrated the main deck of the side-wheel steamship *Maple Leaf* in 1988, they discovered a huge cache of Civil War-vintage artifacts, most of which were incredibly well preserved. A transport rather than a warship, the ship sank quickly after striking a mine in the St. John's River in Florida, carrying to the bottom the personal belongings and camp equipment for a Union brigade headquarters and three infantry regiments. Although only about 1 percent of the *Maple Leaf's* cargo has been excavated, it appears to contain more artifacts in better condition than any other Civil War–period shipwreck (Holland et al., 1993:159).

Artifact assemblages from tightly dated shipwrecks provide not only the opportunity for in-depth comparative analyses, but the necessity to place the objects in a broader historical context. The analysis of passengers' belongings found on the steamboats *Bertrand* and *Arabia* (Corbin, 2000) has led to a richer understanding of the material culture of nineteenth-century immigrants traveling west on the Missouri River (Fig. 13). The discovery of fragmentary Chinese porcelain potsherds in a California Pomo Indian village site led to the discovery of the sailing ship *Frolic*, wrecked on the Mendocino coast in 1850. Layton (2002) used the discovery to tell the broader story of the beginnings of direct trade between China and California at the cusp of the Gold Rush.

Lost Opportunities

Opportunities were missed with USS *Cairo* (1862), the "Marex Mystery Wreck" (A.D. sixteenth century), *El Nuevo Constante* (1766), and HMS *De Braak* (1798), among others. When the Civil War ironclad USS *Cairo* (Fig. 14) was cut asunder by wire cables during attempts in 1964 to salvage it, tons of fragile, perfectly preserved artifacts—the crew's personal possessions and the ship's

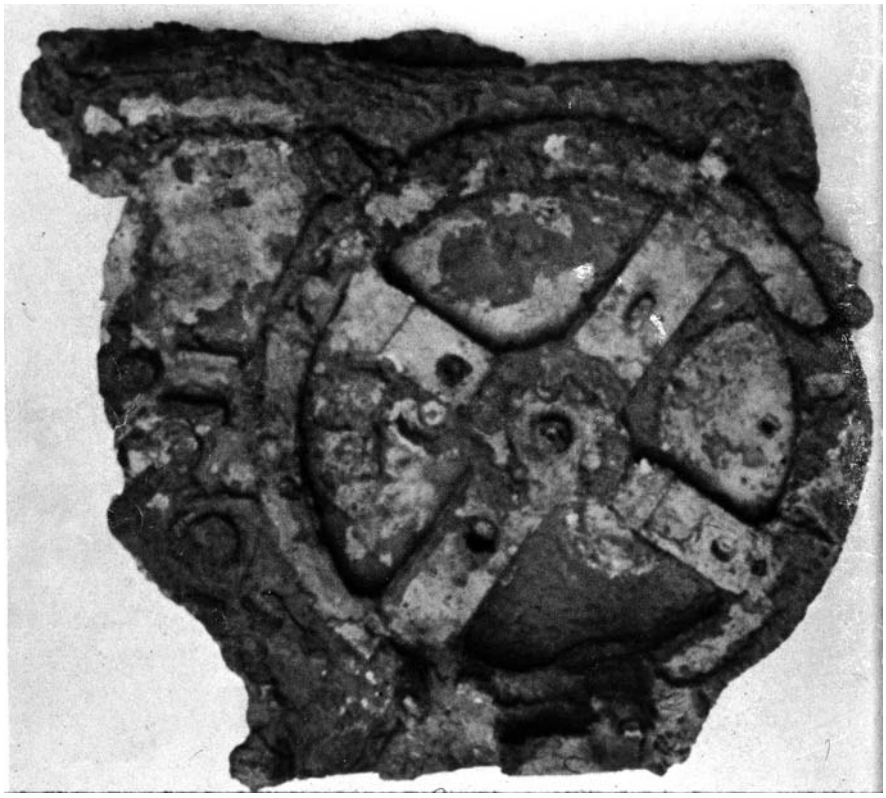

Fig. 12 One of the most astounding archaeological finds ever to come from a shipwreck is this mechanical "calculator" from the first-century-B.C Antikythera Wreck (courtesy Peter Duke)

equipment and weapons—disappeared into the murky Yazoo River, never to be seen again (Bearss, 1966).

The date and identity of a potentially important shipwreck site found near Memory Rock in the Bahamas in the early 1990s will never be known due to the ineptitude of the treasure salvage company that located it. Having secured leases for offshore areas from the Bahamas Department of Transportation, Marex Corporation conducted a multiyear search for the "mother lode" of a seventeenth-century Spanish galleon, *Nuestra Señora de las Maravillas* (1656). The company's methods were so haphazard and unsystematic that no one has been able to determine from how many different shipwreck sites they salvaged material (Armstrong, 1994:9, 1997:27). While this is not an unusual performance for a treasure-salvage company, in this case it was tragic because at least one of the sites Marex destroyed appears to have been a rare sixteenth-century Spanish ship carrying—among other intriguing artifacts—an inscribed, dated, English, bronze cannon cast in the Owen ("Owyn") Brothers foundry in 1543, making it the oldest dated piece of ordnance ever found in the New World (Armstrong, 1994).

The Spanish ship *El Nuevo Constante*—which grounded off the coast of Louisiana in 1766 carrying a cargo of saddles, ceramics, and other trade goods produced in Mexico—was savagely dredged with a clamshell grab in 1980 by the owners of an offshore construction company who thought they would take home a fabulous treasure (Kent, 1980). Several respected, professional archaeologists gave this travesty their blessing, in spite of the fact that the ship's hull and all artifacts other than coins and ingots were destroyed or discarded by the salvagers. The operation was so brutal that even cannons and anchors were smashed and broken.

A Delaware legend maintained that HMS *De Braak*, which capsized and sank in 1798, was carrying a great treasure. Between 1984 and 1986, Sub-Sal, a salvage company, spent $3 million dredging the site and tearing the hull remains apart in a frenzied search for a nonexistent treasure. It is widely believed that these horrific, fumbling

Fig. 13 The excavation of riverboats, such as the *Arabia*, have produced tens of thousands of well-preserved artifacts, as well as extensive hull remains (courtesy *Arabia* Steamboat Museum, Kansas City, Missouri)

attempts to salvage *De Braak* did more to convince the U.S. Congress to pass the Abandoned Shipwreck Act than any other single event, and it lives on in infamy as "one of the worst maritime archaeological disasters in American history" (Shomette, 1996:126).

Conservation

Given the twin facts that it is much easier to find and recover artifacts than it is to treat them, and that for every qualified conservator there are many field archaeologists, it comes as no surprise that artifact conservation is the bottleneck of all underwater excavations (Keith, 2002:746). The consequence of a chronic dearth of qualified conservators and inadequacy of resources allotted to conservation is that only a fraction of artifacts recovered from underwater sites ever receive proper treatment. It is much easier to find support and personnel for a few weeks or months of fieldwork than for the months or years of tedious, laborious, invisible laboratory work that even brief field projects generate.

Fortunately, conservators have been busily sharing what they know in the form of good reference books such as *Conservation of Marine Archaeological Objects* (Pearson, 1987), *Conservation of Metal Objects from Underwater Sites: A Study in Methods* (Hamilton, 1975), *Conservation of Iron* (Clarke and Blackshaw, 1982), *Problems of the Conservation of Waterlogged Wood* (Oddy, 1975), *Conservation of Wet Wood and Metal* (MacLeod, 1989), and many more articles published in the *International Journal of Nautical Archaeology*—as well as journals devoted to conservation, such as *Canadian Conservation Institute Publications and Notes* (CCI), the *Journal of the American Institute for Conservation* (AIC), *Studies in Conservation*, and the *International Council of Museum Papers* (ICOM).

The decision in Sweden to raise intact and conserve the royal warship *Vasa* (1621) in 1960 set a standard that is still unmatched in the achievements

Fig. 14 Attempts to raise the USS *Cairo* from the bottom of the Yazoo River were disastrous (courtesy Vicksburg National Military Park, USDI National Park Service)

of underwater archaeology (Landström, 1988). Since that time, archaeologists have assumed that in order to perform an adequate study of a hull it is always necessary to raise it intact or to disassemble, conserve, and reconstruct it using the original timbers. An important turning point occurred in 1980, when Parks Canada archaeologists decided to "raise, record, and rebury" the massive wooden hull structure of the Basque whaling galleon *San Juan* (1565). Realizing that conservation and reconstruction of the hull could easily double the cost and time necessary to complete the project, Parks Canada decided to perform the archaeological equivalent of withdrawing an asset from a checking account, spending the interest, and redepositing the principal in a savings account. They disassembled the ship under water, raised each piece to the surface where it could be thoroughly recorded, then

reburied it in a specially prepared underwater storage facility. The location of each reburied piece was carefully mapped and provisions were made to extract and check test pieces to monitor condition (Waddell, 1986).

Not surprisingly, professional artifact conservators tend to be ... conservative ... when it comes to embracing new ideas. Still, the necessity to conserve waterlogged objects occasionally leads to new techniques, the revision of old methods (Carlin and Keith, 1996), and the development of innovative approaches to address unanticipated problems. The conservation of the iron screw-steamer *Xantho*, wrecked in 1872, required all three (McCarthy, 2000). As of this writing, there are two major Civil War-period shipwreck conservation projects underway in the United States that will undoubtedly challenge the skill and determination of the conservation community. One case resulted from the partial excavation of the ironclad USS *Monitor*, during which the ship's turret, heavy ordnance, parts of the propulsion system, and other artifacts were raised. The other is the conservation of the entire hull and contents of the submarine *H.L. Hunley*, raised intact from the seabed in a special cradle and brought back to the Warren Lasch Conservation Laboratory for excavation and study (Fig. 15).

How Well Have We Educated the Public and Ourselves?

Finding sites, excavating artifacts, and conserving and reconstructing ships are not ends in themselves, but merely preliminary steps toward the goal of learning and sharing knowledge. Progress in the development of structured learning and teaching programs, in the formation of institutions and societies and the production of texts and reference materials devoted to underwater archaeology was nonexistent in the 1950s, slow in the 1960s, promising in the 1970s, and explosive throughout the 1980s and 1990s. Today, opportunities to read about, view, or actually participate in the process of archaeological investigation abound, but as might be expected of a nascent discipline, there is some unevenness in the experience.

Scholarly and Popular Media

In addition to a plethora of books for general audiences emphasizing gold, jewels, and treasure, such as *Diving to a Flash of Gold* (Meylach, 1971), *Undersea Treasures* (Abbott et al., 1974), and *Into the Deep* (Marx, 1978), the number and quality of more-thoughtful books actually addressing the field of underwater archaeology have been slowly but steadily increasing. Final site reports still seem to take on the order of 20 years to produce, by which time their appearance is often anticlimactic. Sites that have been exploited for treasure are seldom reported in anything other than newspaper articles, but two notable exceptions are *The Recovery of the Manila Galleon Nuestra Señora de la Concepción* (Mathers et al., 1990) and, to a much lesser extent, *Science on a Deep Ocean Shipwreck* (Herendorf, 1995). The latter publication concentrates primarily on biological studies done on SS *Central America* (1857), rather than archaeology (hence the title).

A pivotal publication was *Maritime Archaeology* (Muckelroy, 1978), which remains the only serious attempt to define, codify, and lend theory to the principal branch of underwater archaeology. Another pivotal book, *Hollandia Compendium* (Gawronski et al., 1992), stands alone as one of the best references for artifact identification, while *Evolution of the Wooden Sailing Ship* (Greenhill and Manning, 1988) is arguably the best, most easily grasped, and complete explanation of wooden ship construction. Steffy's *Wooden Ship Building and the Interpretation of Shipwrecks* (1994) is an invaluable resource for the reconstruction specialist.

In the past, only a few scientifically based publications focusing on underwater archaeology, site interpretation, and submerged cultural resource management were published, and then only sporadically. That has changed dramatically in recent years, with the annual publication of a wide variety of such high-quality, well-written books as *Historic Shipwrecks: Discovered, Protected & Investigated* (Fenwick and Gale, 1998), *Historic Shipwrecks* (Fenwick and Gale, 2000), *The International Handbook of Underwater Archaeology* (Ruppé and Barstad, 2002), *Submerged Cultural Resource Management: Preserving and Interpreting Our Sunken Maritime Heritage* (Spirek and Scott-

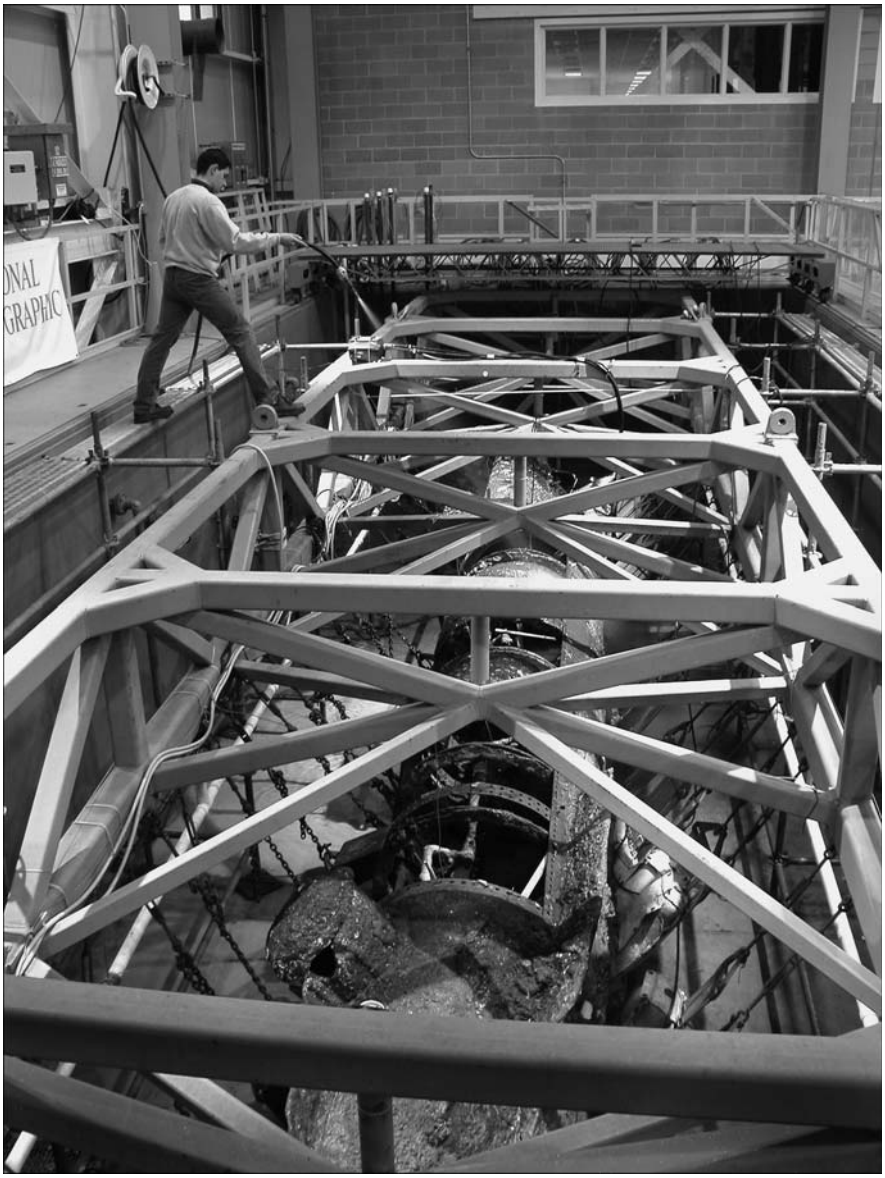

Fig. 15 The Warren Lasch Conservation Center where the Civil War submarine *H.L. Hunley* is being treated (courtesy Donald H. Keith)

Ireton, 2003), *Maritime Archaeology and Social Relations: British Action in the Southern Hemisphere* (Dellino-Musgrave, 2006), *Maritime Archaeology: Australian Approaches* (Staniforth and Nash, 2006), and *Chinese Junks on the Pacific: Views from a Different Deck* (Van Tilburg, 2007).

More recently, archaeologists have attempted to bridge the purely academic and the "archaeology-lite" popular media gap by producing an array of books with enough depth and information to appeal to professionals while not delving so deeply as to cause the general enthusiast to loose interest. Among them are *X Marks the Spot: The Archaeology of Piracy* (Skowronek and Ewen, 2007), *Gifts from the Celestial Kingdom: A Shipwrecked Cargo for Gold Rush California* (Layton, 2002), *Scotland's Historic Wrecks* (Martin, 2003), *The Life and Times of a Merchant Sailor: The Archaeology and History of the Norwegian Ship Catharine* (Burns, 2003), *Beneath the Seven Seas: Adventures with the Institute of*

Nautical Archaeology (Bass, 2005), and *From a Watery Grave: The Discovery and Excavation of La Salle's Shipwreck, La Belle* (Bruseth and Turner, 2005).

In the category of "required reading" for any historical archaeologist tempted to join a treasure hunt is Stephen Keisling's (1994) *Walking the Plank: A True Adventure among Pirates,* which provides an insider's view of the shenanigans surrounding a modern, high-profile treasure hunt—the salvage of pirate Samuel Bellamy's ship *Whydah Galley* (1717). In contrast, the authors of another book, *The Last Voyage of El Nuevo Constante* (Pearson and Hoffman, 1995), fastidiously gloss over the fact that the discoverers dredged it for months until they had satisfied themselves that they had recovered all the treasure before permitting archaeologists to visit the site. The reader may finish the book without realizing that the project was nothing more than a treasure salvage.

With respect to handbooks and technical explanations of the actual methods used in underwater archaeology, British authors have made the most important contributions: St John Wilkes's *Nautical Archaeology* (1971), Muckelroy's *Discovering a Historic Wreck* (1981), Dean's *Guidelines on Acceptable Standards in Underwater Archaeology* (1988), Green's *Maritime Archaeology* (1990), and *Archaeology Underwater: The NAS Guide to Principles and Practice* (Dean et al., 1995). Manuals such as these have inspired and equipped both professionals and nonprofessionals to continually improve the quality and reliability of information they retrieve.

It is more difficult to find well-researched and authoritative documentaries on the subject of underwater archaeology. The best, though now dated and nearly 20 years old, is the BBC series of eight 1-h programs entitled *Discoveries Underwater*, produced in 1988. PBS/NOVA has produced three worthwhile programs: *Treasures of the Sunken City* (1997), *Voyage of Doom* (1999), and *The Sultan's Lost Treasure* (2001) that include online teacher guides and supplemental information. Houston PBS produced the well-researched, hour-long documentary *In Search of La Salle* (1997).

Unfortunately, there are always more programs devoted to entertainment than to education. The best of these merely provide a brief, vicarious adventure; the worst perpetuate the misconception that every shipwreck contains a treasure, that the principle of "finders-keepers" prevails, and that every site is fair game (e.g., *The Deep*).

National Geographic, both the magazine and television programming, has a mixed record in this regard. A quick review of the 41 DVDs available for sale under the category of "exploration" in March 2007 revealed that by far the vast majority focus on the search for high-profile shipwrecks rather than archaeology. These include *The Lost Ships of World War II, The Lost Fleet of Guadalcanal, Search for the Battleship Bismark, Last Voyage of the Lusitania,* and *The Search for Kennedy's PT 109*. Two are blatant promotions for treasure salvage: *Civil War Gold,* about the S.S. *Republic*, and *Quest for Treasure*, about Mel Fisher and *Atocha*. In total, there are 12 DVDs available that are about shipwrecks or the search for shipwrecks. This represents 29 percent of the total, far outnumbering any other topic. Of the 12, only one, *Raising the Hunley*, is primarily oriented toward archaeology.

Educational Programs

While newspaper reporters are not hesitant to bestow the title of "underwater archaeologist" on anyone who can spin a good tale, those who wish to obtain a formal degree to better pursue careers in underwater archaeology may pick from several university-level educational programs available in the United States, Great Britain, Australia, Israel, Denmark, Sweden, and elsewhere. Although "underwater archaeology" is nowhere a degree path in itself, graduates receive degrees in well-established allied subjects, such as anthropology, geography, history, or marine science. It is significant to note that degree-bearing professional archaeologists are highly sought after by for-profit salvage companies to provide the trappings of legitimacy to treasure-salvage schemes. For the relatively small number that succumbs to this temptation, career attenuation has been the most likely outcome. A program that fails to include an emphasis on professional ethics and personal responsibility does its students a disservice (Woodall, 1990).

At the other end of the educational spectrum, less attention appears to have been devoted to reaching

children, the public at large, and lawmakers with the clear and unmistakable message that whatever other appeals it may have, underwater archaeology makes the most efficient use of the shipwreck resource. It is particularly important to reach children in order to inculcate in the next generations a preservation ethic acknowledging that shipwrecks are resources that can be squandered, used efficiently, or saved for the future. David Macaulay's (1993) *Ship,* based on the story of the early sixteenth-century Molasses Reef Wreck (Keith 1997), is an example of a book that has done this. Another is Marc-André Bernier's (1996) *Les archéologues aux pieds palmés,* which is based on excavations at Red Bay, Labrador, and the story of the sixteenth-century Basque whalers who crossed the Atlantic Ocean each year to occupy a seasonal whaling station.

When it comes to educating the public at large, efforts in Australia, Florida, and the Cayman Islands take a two-pronged approach. With the longest coastline in the continental United States, Florida's history is inextricably linked to a maritime context. All historical and archaeological sites in state waters are protected by state law. With only one exception, all shipwrecks in Florida are open for visitation. In an effort to protect these sites from vandalism and uninformed souvenir collecting by sport divers, the state developed a series of Underwater Archaeological Preserves across the state for divers and snorkelers. Visitors are encouraged to explore the sites and are provided interpretive materials that include brochures with images and site-specific history of the wrecking, and a laminated underwater guide illustrating site features. In addition, each site has a bronze marker. Also available are a full-color poster of all of the preserves in the state and a Web site with additional information (Scott-Ireton, 2006). To further the goals of education and preservation, the state established the Florida Public Archaeology Network in 2005. The network has regional coordinators tasked with promoting heritage awareness and tourism, both on land and underwater.

In 2003, the Cayman Islands launched a Maritime Heritage Trail program based upon the successful programs in Florida and Australia. The first phase of the program, shoreside markers and brochures, is aimed at the nondiver. The trail is a land-based driving tour around the three islands, with 36 stops at historically significant sites. Visitors learn about a variety of maritime themes, activities, and industries unique to the islands, such as place-names, lighthouses, architecture, shipbuilding, forts, turtle fishing, and shipwrecks (Leshikar-Denton, 2006). The second phase of the effort will be to establish shipwreck preserves—allowing divers and snorkelers the opportunity to visit selected sites. Both programs demonstrate the value of public outreach and education, whether it be on a large or small scale.

The authors would be remiss if we did not address the influence of the Internet and the proliferation of Web pages on underwater archaeology, maritime museums, maritime preserves, underwater archaeological projects, and related educational programming. A Google search of the term "underwater archaeology" in March 2007 returned nearly 1 million results. Not all web pages are created equal, and to be sure treasure salvors are widely represented—the first link on the list is to a treasure-hunting organization—however, more than ever before, the public can find reasonably accurate, reliable information about the subject. The Internet has quickly become the most direct and effective means archaeologists, managers, and educators have in reaching the public and encouraging the protection and wise use of this declining resource.

Societies

Professionals and amateurs have combined forces to form local, national, and international societies to promote the goals and disseminate the results of underwater archaeology. In England, the Nautical Archaeology Society, publisher of the *International Journal of Nautical Archaeology* (IJNA), is probably the largest, best-organized, most-active international organization. In North America, underwater archaeologists from Canadian, U.S., Mexican, Caribbean, and European nations meet annually during a conference organized under the auspices of the Society for Historical Archaeology (SHA). From 1978 to 1999, papers given at these meetings focusing on underwater archaeology were published by either the Advisory Council on

Underwater Archaeology (ACUA) or the SHA. The ACUA is seeking to reinstate the publication with the Proceedings of the 2007 annual conference.

In Australia, the Australasian Institute for Marine Archaeology (AIMA) holds annual meetings that gather together professionals and avocationals from the South Pacific regions, India, Asia, and Australia. In addition to their annual conference, the institute produces a newsletter, the AIMA *Bulletin* of juried articles, and occasional special publications. The World Archaeological Congress incorporated sessions on underwater archaeology in its 2004 and 2007 (intercongress) meetings and did the same during its 2008 meetings in Dublin. Regional conferences on a variety of topics related to underwater archaeology—including heritage management, maritime landscapes, and research undertaken by government agencies throughout Europe and the Far East—appear with ever more frequency. While many of these are sponsored by universities, as many are sponsored by local societies with a specific interest in the topic at hand. The growth in such meetings reflects the increased interest in and concern for the study and protection of underwater cultural heritage worldwide.

The British Sub-Aqua Club has adopted a pro-archaeology stand with respect to its ethics and curriculum; however, similar scuba-certification agencies in the United States, such as the YMCA, NAUI (National Association of Underwater Instructors), PADI (Professional Association of Diving Instructors), NASDS (National Association of Scuba Diving Schools), and in Australia SSI (Scuba Schools International), seem to be somewhat confused about the difference between archaeology and treasure hunting. The conservation ethic they cherish for marine life is not always extended to underwater archaeological sites and taught as an integral part of classroom instruction. The editors and publishers of such important sport-diving periodicals as *Immersed* and *Skin Diver* appear to suffer from the same confusion. *Skin Diver* has come down firmly against archaeology and government regulation of shipwreck sites. A group of cave divers imprisoned in Mexico for illegally raising Maya artifacts from a cenote in Cozumel were praised in an *Immersed* article (Sterner, 1997:52–55).

Treasure hunters also are organizing. According to its advertisement posted on an underwater-archaeology Listserve, the Professional Shipwreck Explorers Association (ProSEA) seeks to attract archaeologists, anthropologists, resource managers, and museum professionals who wish to cooperate with "commercial shipwreck explorers." If the goal of such a society is to make all shipwreck investigations more responsible, efficient, and conform to the objectives of archaeology, then it is to be applauded. If, on the other hand, ProSEA is merely an attempt to mimic archaeology while continuing to strip-mine shipwrecks, then it is additional evidence of the trend detected by Carrell (1996:75): "In the face of increasing regulation, depletion of the resource, and a more critical public, treasure hunting is mutating by changing its appearance, approach, and pitch. It is migrating to new habitats beyond the borders of the US, and adapting by moving into deep water."

How Well Have We Planned for the Future?

The public at large and policy makers are still confused about the difference between salvage and archaeology. They continue to be swayed by the treasure-hunting industry's absurd but effective efforts to redirect the issue. Shipwreck salvage, they say, represents the American ideal of "free enterprise," and salvors are performing a service by saving valuable cargoes that, although they have lain undisturbed on the seabed for centuries, are now somehow in immediate danger of being destroyed by natural agencies (Fig. 16). Adding to this confusion is the issue of jurisdiction with regard to political boundaries.

U.S. Legislation and International Initiatives to Protect Underwater Cultural Heritage

The Abandoned Shipwreck Act (ASA) of 1987 introduced legislation in the United States that replaced the principals of Admiralty Law, which had furnished the legal grounds on which all shipwreck treasure claims were founded. In it, the U.S. government asserted title to most abandoned

Fig. 16 The Florida treasure-hunting ship *Rio Grande* sporting enormous, tremendously destructive prop-wash deflectors on the stern (courtesy Donald H. Keith)

shipwrecks located within 3 miles of the nation's coastline. Title and management of the majority of these wrecks was then transferred to the state in whose waters the wrecks lay. The ASA made the law of finds and the law of salvage inapplicable to these now-publicly-owned shipwrecks. In 1990, guidelines to assist state and federal agencies to carry out their responsibilities under the act were promulgated (USDI National Park Service, 1990).

The situation with regard to inland waters has also been problematic, even though states already had control over those sites. By way of example, prior to 1990 in Missouri, would-be salvors were taking out "options" to look for steamboat wrecks on bottomlands where river courses formerly ran. Although these sites were clearly difficult to "extract" due to deep mud and sand overburden, the cost of extraction was certainly lower than the costs incurred when working on wrecks in the ocean, making them

attractive targets. In 1990, Missouri passed legislation in an effort to protect the many steamboat and other wrecks potentially to be found on the Missouri River. While the situation is marginally better, the United States still has a patchwork approach to the management of shipwreck sites, and huge gaps exist in the legislation that can still allow commercial salvage (Zander and Varmer, 1996).

The discovery of *Titanic* in 1985 brought to the fore a question that had bothered underwater archaeologists for a long time: Who has jurisdiction over shipwrecks in international waters? Located far offshore in deep water, such sites have neither legal protection nor a mechanism to develop cooperative international programs for study rather than exploitation. Admiralty law was commonly used by those seeking to "arrest" a wreck, control access to it, and formalize their claim to salvage ships of historical significance in international waters. In response to these concerns, the International Council on Monuments and Sites (ICOMOS) appointed a committee to develop guidelines for the responsible management of shipwreck sites. The result was the *International Charter on the Protection and Management of Underwater Cultural Heritage* (ICOMOS, 1996). This charter was the basis of an international agreement, the *Convention on the Protection of the Underwater Cultural Heritage* (2001), drafted by the United Nations Educational, Scientific, and Cultural Organization (UNESCO). One aspect of the convention is to remove shipwrecks in international waters from the jurisdiction of admiralty salvage law and encourage cooperation among nations with an interest in the sites.

The UNESCO *Convention on the Protection of the Underwater Cultural Heritage* is a landmark in the management of archaeological sites because it provides an overall framework for managing activities directed at underwater cultural heritage. An important part of the convention is the Annex Rules, which outlines basic principles for the practice of responsible underwater archaeology and provides specific guidance for research, documentation, and artifact curation.

Emerging as one of the most important accomplishments of the UNESCO meeting of experts on the development of the convention, the Annex Rules are achieving importance beyond the convention itself. While many of the participating nations could not agree on various selected articles in the convention, all agreed on the value of the Annex Rules. This is especially important in those countries where there is little chance of the convention being adopted, such as the United States and Britain, or may take quite some time to achieve. By adopting or incorporating the Annex Rules in guidance documents used by various governmental regulating entities, the level of oversight and professional requirements are being immediately improved and will have the most positive impact. In the United States, federal and state agencies are moving in this direction.

Another example of the impact of the Annex Rules is the four-nation *Agreement Concerning the Shipwrecked Vessel Titanic,* signed July 18, 2004, by U.S. President George W. Bush. The agreement formalizes the status of RMS *Titanic* as an international maritime memorial. As of early 2007, implementing legislation for the agreement is working its way through the U.S. legislative process. The agreement is already enacted in the United Kingdom. The Annex Rules are the underpinnings of the protection for and future regulation of research on the *Titanic* site.

An unanticipated, but welcome, outgrowth of this activity over the Annex Rules is that international archaeological organizations, such as the SHA, the World Archaeological Congress, the Australian National Cultural Heritage Forum, and AIMA, among others, have endorsed the rules as best practice. This, in turn, is having a positive spillover effect on small organizations—including avocational groups and such related organizations as the Council of American Maritime Museums (CAMM), who are also endorsing the Annex Rules and encouraging the adoption of the convention.

Two recent publications on the threats to and management of underwater cultural heritage are also an outgrowth of the ICOMOS and UNESCO efforts. *Underwater Cultural Heritage at Risk: Managing Natural and Human Impacts* (Grenier et al., 2006) focuses on the nature of the resource, threats, and strategies for protection. The contributed articles are written from the perspective of the archaeologists and managers who are facing the problems and had to devise the schemes for addressing them. Dromgoole's (2006) *Protection of the Underwater*

Cultural Heritage: National Perspectives in Light of the UNESCO Convention 2001 pulls together a range of legal and policy positions in different countries and jurisdictions, as well as a discussion of their national positions with regard to the convention. The revised 2006 edition reflects recent developments in the 7 years since the completion of the convention. It also describes changes within the archaeological community and the pressure being brought to bear on their governments to ratify.

The Deep Ocean Frontier

Over the last three decades, underwater technology has been gearing up for a major assault on hitherto-inaccessible deepwater sites. Tech diving using mixed gas breathing media and rebreathers has doubled the operational depth limits of scuba. The availability and use of submersibles, ROVs, and tethered robots has proliferated. The use of saturation diving in underwater archaeology is no longer a novelty (Fig. 17). How

Fig. 17 Test excavation of the third-century-B.C Secca di Capistello shipwreck in 1978. Using saturation divers required a large mother ship over the site and a supply vessel to ferry mixed gas and support equipment and personnel to the site (courtesy Donald H. Keith)

important is deepwater archaeology going to be? The impression one gets from accounts of the deepwater shipwreck-recovery projects that have taken place as of this writing—the *Seahawk* wreck (1622) in 1,300 feet, the Isis wreck (A.D. fourth century) in 3,000 feet (396 m), *Central America* (1857) in 8,000 feet (2,438 m), SS *Republic* (1865) in 1,700 feet (518 m), and *Titanic* (1912) in 13,000 feet (3,962 m)—is that they were conceived and undertaken for profit or to showcase the marvelous capabilities of the latest technology, rather than as archaeological projects. Given the expense involved in finding and recovering shipwrecks located in the abyssal depths, the impetus to make the site pay for itself is strong indeed; still, the potential is vast.

What portion of our collective shipwreck resource account resides in the world's deep oceans? In his seminal book, *Deep Water, Ancient Ships,* Willard Bascom (1976:84) attempted to estimate the percentage of all shipping losses that occurred in deep water. He studied nineteenth-century ship losses in Lloyds of London records and concluded that 20 percent occurred somewhere other than in coastal waters. Examining loss records for the 5-year interval between 1864 and 1869, he noticed that 10,000 sailing ships insured in England were lost at sea and that 10 percent of these disappeared without a trace. Based on this statistic, and extrapolating back to the beginning of seafaring, he goes on to estimate that something on the order of 40,000 ships lie on the deep-ocean bed. Sampling a different set of shipwreck reports for a different period of time, New World shipwrecks between 1492 and 1825, Marx (1971:46) reports that 98 percent sank in water depths of less than 10 m. Perhaps the global average lies somewhere between these two estimates, which differ by an order of magnitude.

In the several years since the initial work on this chapter, deepwater projects by treasure-salvage companies have continued to appear. In 2003, Odyssey Marine, a United States-based treasure-salvage company, discovered the merchant ship SS *Republic,* sunk in 1865 while carrying a cargo of coins from New York to New Orleans. Because the site was located 100 miles off the coast of Georgia in 1,700 feet (518 m) of water, and because no legal protections were in place, Odyssey was able to obtain control of the site and begin work immediately. When the company ceased operations on the site in February 2005, it had recovered, among other things, 51,000 coins with an estimated retail value of $75 million. It is interesting to note that original estimates for the value of the coins were $120–180 million (Handwerk, 2003). The fate of the 14,000 other artifacts recovered from the site, including almost 6,300 bottles, is not reported on the company's Web site. The two projects clearly reflect the company's stated criterion on its Web site that the shipwreck must be "carrying enough intrinsically valuable cargo to pay for the high cost associated with deep-ocean recovery . . . and to provide an attractive return for the company's investors and shareholders."

Odyssey is currently pursuing salvage of a ship believed by the British Government to be the 80-gun, third-rate-warship HMS *Sussex,* lying at a depth of nearly 3,000 feet (914 m) in Spanish waters near Gibraltar. Odyssey obtained a final agreement with the British government to excavate the site in 2005, and as of early 2007 had completed a required environmental survey of the area. The delay between discovery and permission was, in part, due to the site being a potential war grave, its status as a military ship, its location in Spanish-controlled waters, and strong opposition to the project by archaeologists in the United Kingdom. Clearly, a project of this type would not be attractive unless there was some likelihood of a big payoff or if no shallow-water site could yield a similar return. Odyssey maintains that HMS *Sussex* contains 10 tons of gold and 100 tons of silver.

The fact that salvors are increasingly willing to front the tremendous costs and time of deepwater searches and recoveries is another ominous indication of the growing scarcity of significant shipwreck sites. Published figures for the *Central America* salvage indicate that the equipment and personnel costs for fieldwork alone were well over $14.5 million (Kinder, 1998:501–502). Tommy Thompson, the leader of the *Central America* salvage, boasted that his find was worth $1 billion, but the investors who put up $55 million to finance the project have, 20 years later, yet to see a penny of returns! Some of the surviving partners are suing to get their money, or at least an accounting, but Thompson's attorneys are doing their best to keep everything secret by requesting the sealing of pleadings and dockets. In fact, as of 2006, when *Forbes* magazine ran an investigative article on the case, Thompson was nowhere to be

found. He is believed to have absconded with many millions of dollars (Tatge and Gottfried, 2006).

There can be little doubt that the deep ocean contains many shipwrecks of all types from all times; however, the difficulty of reaching them, let alone excavating and studying them with the standard of care and precision expected of modern underwater archaeology, is daunting. As early as 1977 archaeologists were encountering some of the difficulties—and promise—associated with deep-water work (Keith, 1979:298–299). After diving accidents claimed the lives of two archaeologists attempting to work on a third-century-B.C. shipwreck on a steeply sloping bottom between 55 and 88 m at Secca di Capistello in the Aeolian Islands, a cooperative effort between archaeologists and a commercial diving firm showed that such work could be accomplished safely using saturation diving, a one-atmosphere diving bell, and a submersible. At this writing, the depth limit for precision archaeology is about 100 m, the maximum practical depth for free-swimming, "hands-on" excavation.

International, Illicit Traffic in Antiquities

The international traffic in antiquities is a global problem of unknown proportions, but estimates of the money that changes hands range from $100 million to $4 billion annually (Grose, 2006). While little can be done to curtail the antiquities black market on the scale of the individual collector other than to attach social stigma to the activity through education, the habits of large-scale collectors, such as museums, are changing. The International Congress of Maritime Museums (ICMM) adopted standards in 1993 dealing with remains from shipwrecks. These standards prohibit the acquisition or exhibition of artifacts that have been stolen, illegally salvaged, or removed from commercially exploited archaeological or historical-period sites. The standards follow similar guidelines and codes of ethics of the International Council of Museums (1987) and the UNESCO (2001) *Convention on the Protection of the Underwater Cultural Heritage*. In the United States, Canada, and Mexico, three separate exhibits resulting from treasure-salvage projects were either canceled, declined, or accompanied by a public debate between salvors and the preservation community. It is clear that the existence of these guidelines is important and that their influence is being felt.

Despite these positive signs, objects from treasure-salvaged shipwreck sites continue to show up at auction. The 2004 discovery of the Dutch East Indiaman *de Rooswijk* (1740) in British territorial waters, and subsequent salvage contract let by the Netherlands, resulted in the recovery of 19,000 coins that were put up for auction in March 2006 by Ponterio, Incorporated, at the Chicago International Coin Show in the United States. While the ship has since received protection under the British Protection of Wrecks Act (Great Britain, 1973), the previously salvaged coins and other items held by the salvors were exempted. Unfortunately, this is not a unique example.

Conclusion

Technological breakthroughs, first in the 1830s with the invention of the surface-supplied, closed helmet diving dress, then in the late 1940s with the appearance of various forms of scuba gear, have given us the means with which to freely explore and exploit the portion of the underwater world lying between the surface and a depth of about 100 m. Following World War II, the rates at which underwater archaeological resources, particularly shipwrecks, were discovered and extracted rapidly accelerated, but now appears to be in decline in some areas as a result of depletion. A review of hundreds of site discoveries since 1952 reveals that efficient use of the shipwreck resource—one that maximizes return for what is consumed—has seldom been practiced, partly because of a lingering perception that the supply of sites is inexhaustible. This erroneous perception is constantly reinforced by the ability of improved technology to compensate for the decreasing size of the resource by locating new sites in remote areas, under difficult conditions, and in deep water.

Whether one believes that the shipwreck resource should be used for research and education or

commercial salvage, evaluating its condition is a necessary first step. The action we are proposing is a simple audit of the shipwreck resource using a method that has served the oil industry well, but may be new to archaeologists. The product of such an audit will be the equivalent of a financial statement indicating the health of the shipwreck account.

The audit may be applied to existing, small-scale databases by sorting site records according to date of discovery and present status: "extracted" or "in reserve." The results may be combined with other similarly sorted databases to develop patterns on a larger, even global, scale. At the heart of the audit is the assumption that the best indication of how many shipwrecks are left is the pattern revealed by plotting the number of shipwrecks discovered per year over time. The pattern is a curve that rises gradually and, all other factors being equal, peaks and then begins to decline. The complete process creates a bell-shaped curve, and the issue for shipwreck-resource managers is where we are on that curve. Is the resource still on the rise or already in decline?

Like petroleum geologists, shipwreck archaeologists should recognize that ultimately it is *production*—not the number of wells discovered per year—that is important and that production always lags behind discovery (Fig. 18). Unlike wells, which are rated according to the number of barrels of oil they produce, archaeological sites cannot easily be evaluated according to their "productivity." However, if "productivity" criteria could be developed to evaluate each site objectively, it could produce a statistic more meaningful than just the number of sites discovered.

If the Hubbert Model applies to shipwreck-site discoveries, then there is a quantitatively based reason to suspect not only that the resource is finite, but also that in certain areas we have, in less than 40 years, discovered—and in about 10 percent of the cases completely removed—more than half of it. When we will "run out" of significant shipwreck sites depends both on how many are left and how rapidly they are being depleted. Refinements in technology may be making more sites available, but the rate of consumption in areas where sites are still plentiful continues to increase.

If we are interpreting the indications properly, maintaining the present rate of use will exhaust the potential for new shipwreck discoveries within four decades in those areas of the world where heavy exploitation has already taken place, such as Australia, the Mediterranean coast of Europe, Great Britain, Canada, the United States, and much of the Caribbean. The news, however, is not all bad. Many of these same countries now have legislation regulating their remaining underwater cultural heritage, curtailing the pell-mell rush to squander it to complete exhaustion. In late 2008, UNESCO received the twentieth and final ratification necessary to bring the *Convention on the Protection of the Underwater Cultural Heritage* into force.

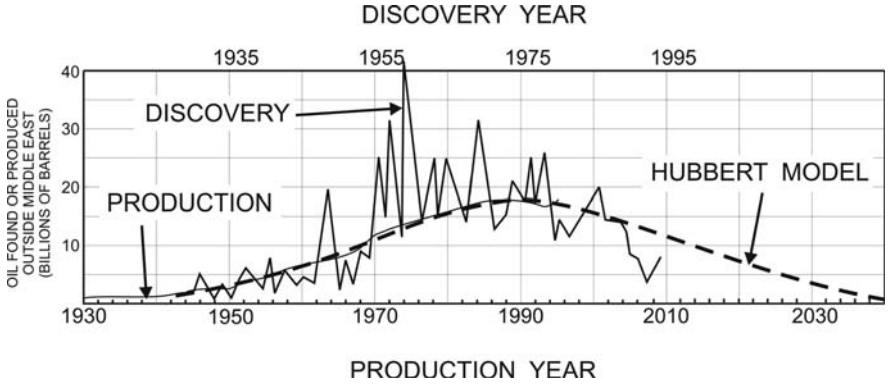

Fig. 18 Using three different techniques including the Hubbert Model, Campbell and Laherrère predicted that the world will run out of cheap oil soon after A.D. 2030. This graph shows that production lags about 15 years behind discovery, and that when discovery and production curves are overlaid, they closely follow the predictive Hubbert Model. At the present time, shipwreck discoveries can be plotted over time, but there are no criteria by which to rate production objectively. In any case, the Hubbert Model matches both curves (after Campbell and Laherrère, 1998:80) (courtesy Ships of Discovery, Corpus Christi, Texas)

On January 2, 2009, the convention entered into force as an international agreement, and as such will carry with it a certain level of authority and exert a certain level of pressure to conform to its rules. If nothing else, even nations that do not intend to ratify or have not yet ratified tend to fall in line with the provisions of international agreements of this type and abide by their provisions—a major step forward in the protection of underwater heritage.

Additionally, a large proportion of the sites that have been discovered are "in reserve"—examined, and in some cases partially excavated, but still sufficiently intact to be of interest to archaeologists in the future. Currently, the shipwreck resources in developing countries are at the greatest risk because they are taking the full brunt of experienced, well-equipped-and-financed, First World–based commercial salvage operations spreading out across the globe looking for rich new hunting grounds. Sadly, many sites will be discovered and extracted before the nations in whose waters they lay are aware of their existence or of the alternatives to simple commercial salvage.

Humans do not always respond to impending, but avoidable, extinction with a conservation ethic. When it became apparent in the nineteenth century that certain species of whales had been hunted to the brink of extinction in the waters around Tasmania, whalers responded by increasing their predation to extract as much as they could before the resource collapsed completely. The plight of the American bison followed a similar pattern. A population including herds numbering as many as 60 million in 1830 was reduced to about 1,000 individuals by 1889, when steps were finally taken to halt the carnage. So long as a "frontier mentality" exists in which the resource is considered to be inexhaustible, excessive consumption and inefficient use will be the rule rather than the exception. It does no good to recognize how wisely the resource could have been used after it is gone.

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Preparing for an Afterlife on Earth: The Transformation of Mortuary Behavior in Nineteenth-Century North America

Charles H. LeeDecker

Introduction

Mortuary behavior is one of the most fascinating and fruitful fields of investigation in the social sciences and one that has drawn widespread interest in historical archaeology. Since the pioneering early twentieth-century studies by Arnold van Gennep (1960) and Robert Hertz (1960), the study of mortuary ritual has been recognized as an important element of cultural anthropology (Metcalf and Huntington, 1991). Within the social sciences in general, the beliefs and rituals surrounding death are regarded as an important part of a culture's worldview (Goody, 1975). Historians and other social scientists have also been attracted to the study of deathways, including the beliefs, activities, and literature associated with death, the afterlife, and mourning behavior (Pine, 1975; Shively, 1988). These topics form an important element of historical mentalities or attitudinal studies. Grounded in the field of sociology, Jessica Mitford's (1963) exposé of the modern American funerary industry expanded the realm of mortuary behavior from a mere academic interest, placing it firmly in the public consciousness.

Mortuary behavior is currently one of the most important subjects in the field of historical archaeology, with approaches that range from the actual excavation of cemeteries to nonintrusive methods such as the analysis of gravestones, texts, and art. A bibliography on the historical archaeology of cemeteries published more than a decade ago listed nearly 2,000 publications and cultural resource management reports dealing with the subject (Bell, 1994). Since that time, the number of archaeological studies has continued to expand. Not only is there a greater academic interest in this topic, but there is also a growing need for archaeologists to excavate cemeteries, as urban redevelopment and suburban sprawl puts more and more burial places at risk. Important contributions to the field have been made by proponents of the new archaeology, structural archaeology, symbolic archaeology, postprocessual archaeology, and feminist archaeology—virtually all of the major intellectual approaches that have shaped the field of archaeology in recent decades.

Today, there is such an extensive literature pertaining to mortuary behavior in the field of historical archaeology that it will be possible here only to hint at the breadth of research in the field. This chapter examines some of the more important developments that occurred in mortuary behavior during the nineteenth century, drawing primarily on work in the eastern United States and in Great Britain. With the rise of urbanism, industrial capitalism, and consumerism, attitudes toward death changed profoundly during the nineteenth century in the English-speaking world. Important cultural changes occurred that were expressed not only in popular attitudes, behaviors, and the ideology surrounding death, but also in the material culture associated with cemeteries, burial furniture, and memorials to the dead. The fruition of these developments in mortuary behavior in the nineteenth century have come to be known as the Beautification of Death movement or the Cult of the Dead.

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Historical Development of North American Mortuary Practices

What may perhaps be referred to as traditional or folk colonial American attitudes and death rituals were strongly influenced by traditions that developed in medieval and renaissance Europe, but a number of important regional variations developed as these customs were transferred to the North American colonies. Relatively little information is available about Colonial mortuary behaviors from textual sources, as death and funerals were seldom written about or commented upon by contemporary observers (Stilgoe, 1982). It would be a mistake to assume that there was a single set of attitudes or beliefs about death that permeated all classes and regions.

In the American colonies, there was much similarity with established British patterns, as a result of direct transfer. The Puritans of New England had the most strongly developed beliefs concerning death and the afterlife, and these beliefs had a wide influence throughout the colonies. Much of the medieval view of death survived in Puritan ideology, especially the imagery of decay and physical corruption of the body that accompanied death. The Puritans equated the moment of death with a time of judgment of the deceased, and they believed that the living could do nothing for the dead other than to respectfully inter the lifeless corpse. Puritan funerals were therefore marked by simplicity, but by the end of the seventeenth century, the strict Puritan views began to dissipate, and funerals became more elaborate, with prayers, preaching, and the distribution of token gifts such as rings and gloves. Feasting and drinking was an important element of Colonial funerals in southern areas, but not in New England. Differences also emerged between urban and rural areas during the nineteenth century; a number of important changes emerged in urban areas, while mortuary practices in the rural areas remained somewhat conservative (Farrell, 1980; Geddes, 1981; Habenstein and Lamers, 1955). Much of the variation in mortuary behavior that emerged in different regions is apparently less related to chronology than to local population densities and developmental staging.

Funerals were typically community events attended by neighbors and friends of the deceased's family. Burial of the corpse would have taken place within two or three days following death, as embalming was not widely practiced before the American Civil War. Undertaking as a profession began to develop in urban areas of North America during the early nineteenth century. Before undertaking developed as a recognized profession, preparation of the corpse for burial was often carried out by nurses. In rural areas, neighbors and friends would have assumed responsibility for the burial arrangements, including laying out of the corpse and digging the grave (Habenstein and Lamers, 1955; Sloan, 1991; Stilgoe, 1982; Taylor, 1980). Before the nineteenth century, the common treatment of the dead involved washing, laying out, and wrapping the corpse in a shroud. Shrouds were usually made of linen or cerecloth, which was wax-impregnated linen, and they were shaped like a long dress or shirt, bound up with pins or knotted at the feet. The absence of clothing, aside from burial shrouds, appears characteristic of the traditional method for treatment of the dead (Geddes, 1981; Habenstein and Lamers, 1955; Taylor, 1980).

The appearance and siting of graveyards varied by region, with distinctive patterns in New England and the South, as well as variations between rural and urban areas. Developing frontier areas typically began with a pattern of isolated interments and homestead graveyards, followed by more formal burial places (Mytum, 2003, 2004). In New England, graveyards were often sited in the center of town, adjacent to a church. In the South and the Middle Atlantic Tidewater area, private family plots were the most common form of burial ground. They were most often located behind the farmhouse and away from the principal road on which the farmhouse was sited, not foregrounded in the cultural landscape. Rural family burial plots were seldom given elaborate landscape treatment, but were simply set off by a fence, wall, drainage ditch, or distinctive plantings (Stilgoe, 1978, 1982). While family cemeteries were often forgotten and neglected after a change of property ownership, they continue in use to the present day, but are much less popular than lawn-park cemeteries, municipal cemeteries, or churchyard cemeteries.

Formal graveyards in northern villages and towns were more likely to have a distinctive

landscape treatment, particularly by the planting of trees and shrubs such as yew, holly, rosemary, willow, or cemetery periwinkle. Southern family and community graveyards were planted with cedars, gardenia, mimosas, and crepe myrtle. In outlying and frontier areas, family plots outnumbered community graveyards (Stilgoe, 1978, 1982). Elaborate landscaping of cemeteries did not occur until the nineteenth century, when the rural cemetery spread through Western Europe and eastern North America.

Colonial gravestones were seldom elaborate and were commonly made of wood or plain stone. Carved stone markers were more likely to be found in urban areas, while wooden markers or unadorned stones were commonly used through the colonial period, and much longer in rural cemeteries (Bachman and Catts, 1990; Garrow, 1989; Pike and Armstrong, 1980; Stilgoe, 1978, 1982). The spatial patterning of interments within cemeteries typically reflected kin groupings, a practice that has persisted to the present. Spatial proximity of the dead in the graveyard thus reflected the social networks of the living (Francaviglia, 1971). Beyond kinship, spatial proximity in cemeteries also occurs along the lines of ethnicity and religious denomination. The practice of interring the body with the head to the west and the feet to the east, facing the rising sun, was established before the Christian era. European Iron-Age burials were typically oriented in this way. According to Christian tradition, this orientation prepared the deceased to rise up to meet his or her Savior, who would come from the east. This traditional alignment of interments persisted into the nineteenth century, particularly in small, rural family cemeteries (Saxe, 1971; Sloan, 1991; Stilgoe, 1978, 1982).

Symbolically, coffins may be viewed as vessels designed to carry the dead to the next world, hence they are among the most important objects associated with death ritual. The hexagonal coffin form, also known as a "shoulder" or "pinch toe" coffin, was widely used in the American colonies, and its use persisted through the mid-nineteenth century. Before the Beautification of Death movement began in the nineteenth century, most coffins were simple, utilitarian vessels, made up of nothing more than a few boards and nails, entirely lacking in elaborate decorative hardware. The simplest hexagonal coffin was built with a flat lid. Another coffin form that was occasionally used in some areas during the Colonial period featured a gabled lid. This type of coffin was sometimes built with straight sides, either in a rectangular or trapezoidal shape, with the gable ridge running along the length of the coffin. Hexagonal, gable-lidded coffins were also used, but these demanded a much higher level of carpentry than the basic flat-lidded style (LeeDecker, 2001).

In the Colonial period, coffins were built by a local carpenter, cabinetmaker, or wheelwright after a death occurred. As coffins were made individually to suit the decedent, rather than manufactured in standard sizes, the carpenter needed a few measurements from the corpse before beginning work. Only a few simple tools were needed; the only specialized tool was a marking board, which was used to lay out the hexagonal shape of the bottom board. By the late nineteenth century, cabinetmakers in the urban areas began to specialize in coffin making. Eventually, the proprietors of these shops added other funerary tasks to their business and developed the modern profession of undertaking. In rural areas, coffin making continued to be an occasional task performed by a local carpenter or wheelwright until well into the nineteenth century (LeeDecker, 2001).

It is impossible to characterize a single colonial American worldview, as there was much variation between classes and ethnic groups. Christian theology had a primary role in preparing the living for what was to come after death. Most importantly, Christianity affirms the existence of an afterlife, so that physical death was viewed not as the end of existence, but instead marked a passage to another world. With the growing influence of natural science, American and British attitudes toward death began to change during the late Colonial and early Federal period. But while attitudes were changing, many ideas and beliefs persisted. As Ariès (1974) has observed, attitudes and beliefs toward death may persist over centuries and millennia, appearing almost a-chronic.

The beliefs that death marked a time of judgment, that individuals faced different fates after death, and that resurrection or return of the soul

were possible were all rooted in western civilization as early as the third millenium B.C. in Egypt. The fear of and obsession with death reached a peak in the Middle Ages, which many historians attribute to the numerous plagues, epidemics, and short life spans of this period. The concept of hell or purgatory reached its peak of development during the late Middle Ages, and it was believed that far more souls went to Purgatory than were saved, and the imagery of eternal torture was well developed in contemporary visual art (Stannard, 1977).

The medieval preoccupation with death is illustrated in the *Danse Macabre* and the *Ars Moriendi*, both of which were literal interpretations of the decay and decomposition of the human body that followed physical death. In the late Middle Ages, the human skeleton or a decayed corpse was commonly used to personify death. The *Danse Macabre*, or Dance of Death, was a procession in which both the living and the dead took part. Typically, the living included persons of high social rank, such as popes, bishops, kings, and dukes, and the dialogue between the living and the dead conveyed the notion that all human life and attainment was transitory. Other scenes of the *Danse* portray death visiting children, farmers, and artisans. Thus, death obliterated the differences of age, ethnicity, wealth, birthright, and worldly position that defined status in the world of the living. The *Ars Moriendi*, which translates as "the art of dying," provided guidance for all individuals who must prepare to face death. The proliferation of *Ars Moriendi* books in the fifteenth and sixteenth centuries expressed and expanded the medieval world's greater familiarity with death. In these books, the moment of death typically was portrayed as a public event, in which the dying person, lying in bed, was tempted and assaulted by demons, in the face of which the dying person was supposed to maintain his or her faith and belief in the goodness of God (Ariès, 1985; Clark, 1950; Stannard, 1977). The idea of the "good death" persisted in folk tradition, as did the metaphor of sleep, as expressed in the iconography of beds and pillows that remained prominent in the Beautification of Death movement (Mytum, 2004; Tarlow, 1999a).

In Christian theology, death marks both the end of life and the beginning of the afterlife. The afterlife was portrayed as a separate world, and the grave was seen as both the physical and symbolic entrance to that world. In both religious and vernacular art, death was often represented as a gateway, a doorway, or an opening to a cave or subterranean space. In religious art, this imagery is explicit in compositions showing Christ's descent into limbo, in which the central figure is departing the world of the living through an opening into a darkened underworld abyss. The ideal or exemplary Christian death of the Middle Ages was the death of the virgin, lying in a bed surrounded by the apostles. In the more vernacular art of the Middle Ages, particularly as seen in the *Ars Moriendi*, the dying individual is portrayed in bed, surrounded by kin, neighbors, coworkers, and a priest who administered the last rites. People were expected to prepare themselves carefully for death, and the dying person played the central role, and he or she was expected to die with great dignity. A proper death required the dying individual to ask forgiveness from each person in attendance and to wish them well (Ariès, 1974, 1985).

The Last Judgment was among the most common subjects found on church entrances and miniatures dating to the late medieval period. Images of the Last Judgment feature the weighing of souls by the Archangel Michael, separating them into those destined for eternal life in Paradise and those damned to eternal torment in Hell. Death was the moment at which the fate of the individual soul was decided, and the vernacular iconography of the late medieval period began to portray this time of judgment at the time of the individual's death rather than at the "end of time" during the Second Coming of Christ (Ariès, 1974, 1985).

As science and rationalism began to take hold in western Europe and the American colonies, there was an emphasis on the discovery of the laws and scientific principles that ordered the natural world. In this context, death came to be viewed as a routine event in the cycle of nature, rather than a time of judgment for the soul. Historians have identified this philosophical shift in attitudes toward death through the study of wills and testaments made in anticipation of death. This trend was marked by greater attention to the disposal and distribution of wealth, rather than arrangements for prayers, religious services, and charitable acts that would ensure the salvation of the soul. This attitudinal change, described as "dechristianization" (Goody,

1975) or "secularization" (Ariès, 1974) began first among the elite classes, but eventually permeated western society as a whole (Gittings, 1992).

The Romantic movement also had a profound influence on the attitudes toward death and the afterlife. Romanticism began to develop in the late eighteenth century and had a major influence in the arts during the early nineteenth century. The principal elements of the Romantic philosophy included profound reverence for nature, an emphasis on feelings and emotions, and a keen interest in anything ancient, mysterious, or exotic. Aside from literature and the visual arts, the Romantic movement had a major influence on mortuary behavior and attitudes toward death and the afterlife. The increased importance given to death during the nineteenth century has been recognized and described as the Cult of the Dead and the Beautification of Death movement. First, there was an increased amount of sentimentalization surrounding death and the afterlife. The death of a relative or a loved one became a profoundly emotional experience, and one that was prolonged through more lengthy and elaborate mourning behaviors. The afterlife became idealized in literature and the visual arts as well as popular culture (Ariès, 1974; Bell, 1990; Farrell, 1980; Stannard, 1977, 1980). These attitudinal trends were clearly expressed in material culture, especially through more and more elaborate monuments and coffins, and thus they are often interpreted as an element of consumer behavior or a display of wealth and status. Tarlow (1999a, 1999b), however, argues that it is more appropriate to understand these trends as reflections of the emotional connections between the living and the deceased.

Both in poetry and painting, the English poet and artist William Blake provided some of the most explicit imagery pertaining to death and the afterlife during the late eighteenth to early nineteenth century. Although Blake's vision was anything but conventional, and his work was not widely popular during his lifetime, his work does reflect the changing ideas and attitudes toward death that were expressed by the Romantic movement. Blake's illustrations for Robert Blair's poem *The Grave*, published in 1808, graphically portray Romantic notions of death and the afterlife (Blair, 1808). The *Day of Judgment* employs an overall composition that displays remarkable similarity to illustrations of the Last Judgment that date to the fifteenth and sixteenth centuries, attesting to the longevity of images and visual symbols in a culture's collective consciousness. Another illustration for *The Grave*, entitled *The Meeting of a Family in Heaven* (Fig. 1), clearly portrays the afterlife as a place where one is reunited with those with whom one shared life in the natural world. This is an important difference from the medieval view, wherein the afterlife culminated by a reunion with Christ. But in *Death's Door* (Fig. 2), Blake explicitly used the iconography of death as an entryway or passageway to another world that was commonly seen in religious art, especially in representations of Christ's descent into Limbo.

Along with Romanticism, a new literary genre, consolation literature, became an important element of popular American middle-class culture in the mid-nineteenth century. Much of the consolation literature focused on deathbed scenes and detailed descriptions of the afterlife, portrayed in the most mundane detail. By sentimentalizing death and the afterlife, this literary genre encouraged prolonged periods of mourning, elaborate funerary practices, and conspicuous memorials to the dead, all of which defined the Beautification of Death movement. In the consolation literature, which to a large degree reflected the popular tastes and ideals, Heaven was portrayed not as the Kingdom of God, but as a domestic paradise where loved ones were reunited after being separated by death (Ariès, 1985; Douglas, 1975; see Fig. 1). The portrayal of the afterlife as a place to meet friends and family was not limited to popular literature; it was also expressed in the inscriptions on cemetery monuments (Tarlow, 1999a, 1999b).

With the spread of the rural cemetery movement, nineteenth-century developments in mortuary behavior were also expressed in landscapes. The rural cemetery movement was marked by the creation of expansive, elaborately landscaped burial places, which appeared more as public parks designed to provide opportunities for leisure, contemplation, and edification for the living. In North America, the beginning of the rural cemetery movement was marked by the creation of Boston's Mount Auburn Cemetery in 1831, and it quickly spread to other major urban centers of the northeast. The new rural cemeteries were typically

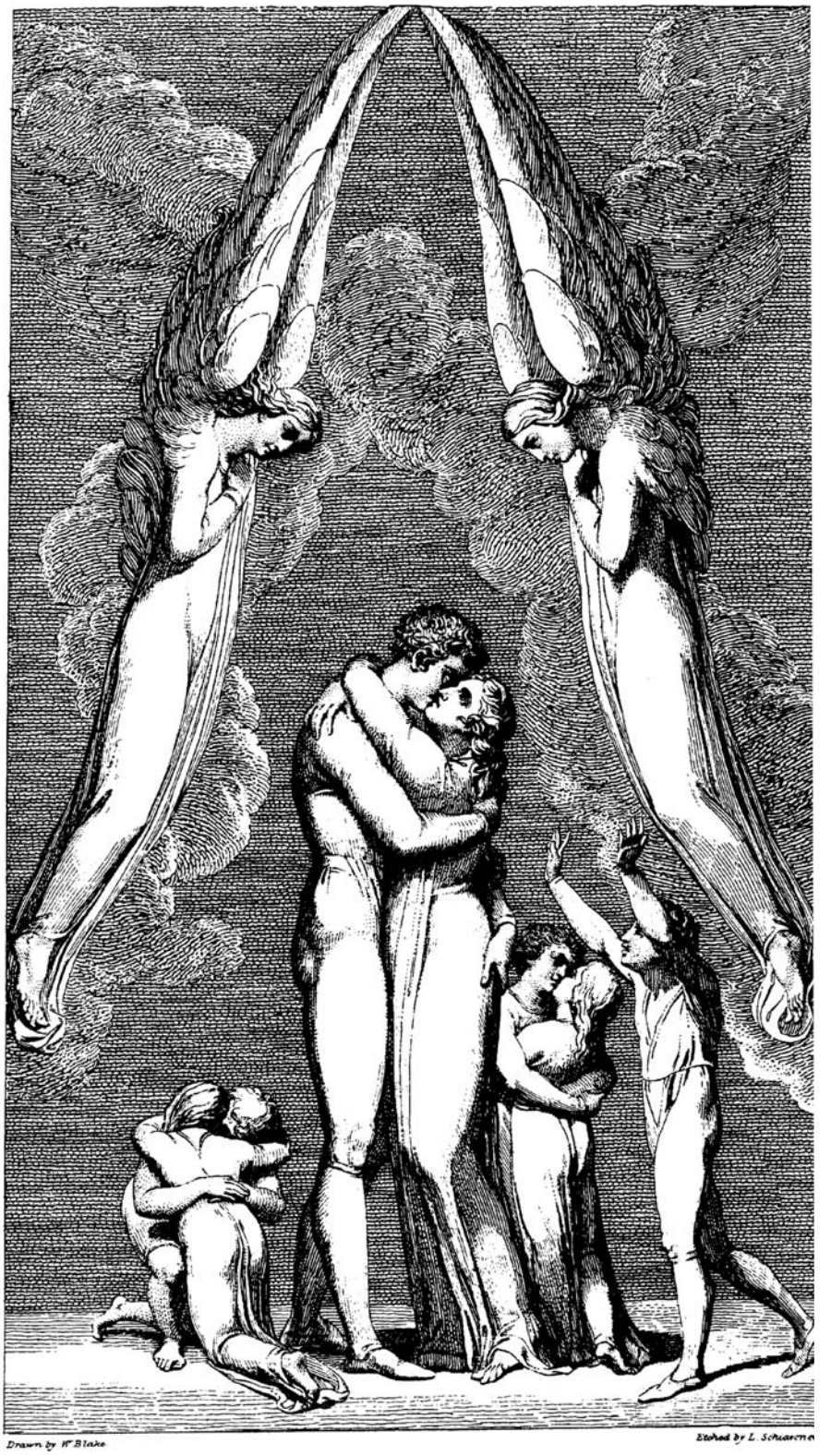

Fig. 1 William Blake's illustration *The Meeting of a Family in Heaven* (from *The Grave, a Poem* by Robert Blair [1808])

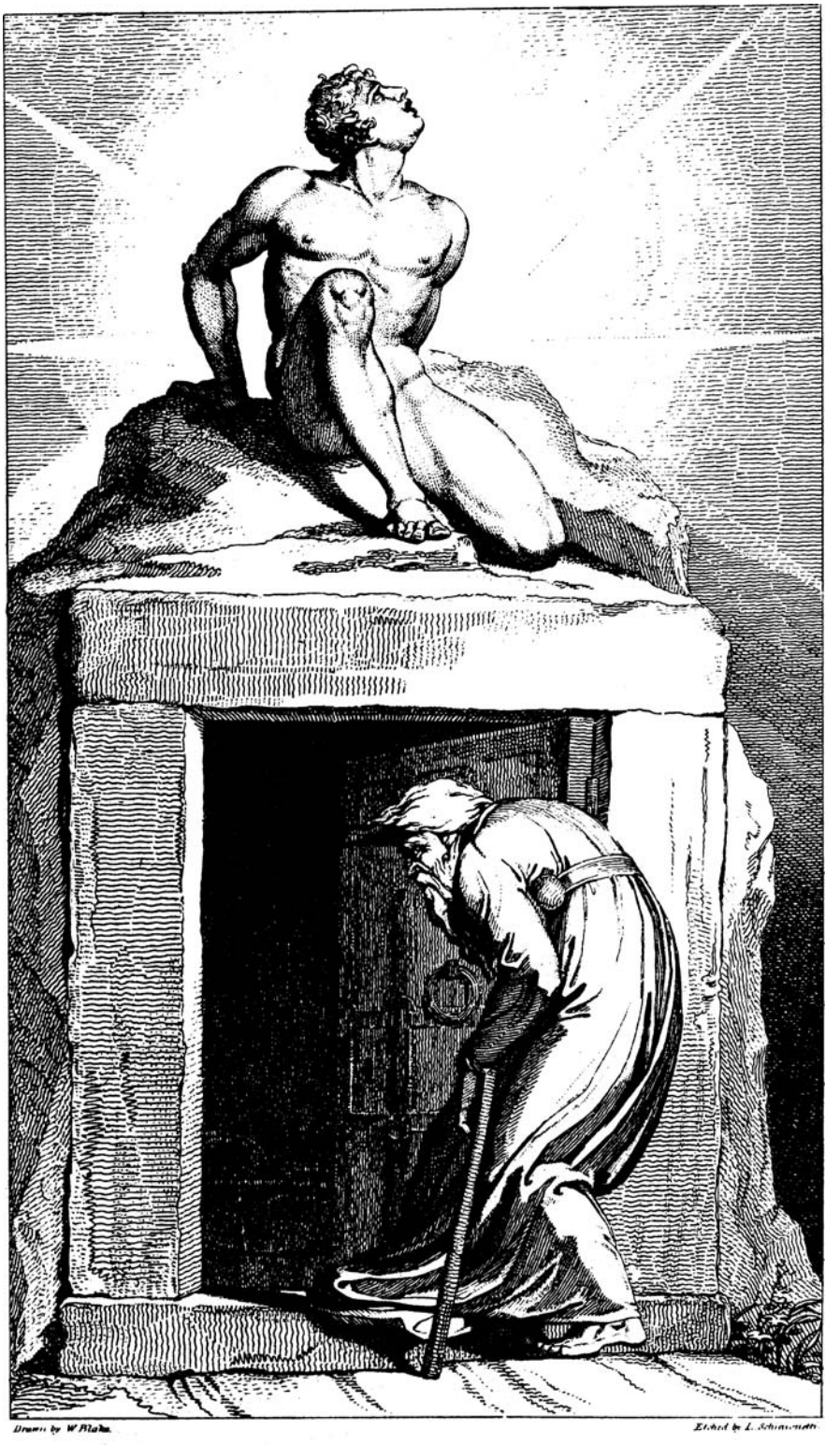

Fig. 2 William Blake's illustration *Death's Door* (from *The Grave, a Poem* by Robert Blair [1808])

founded by private groups or municipal agencies, which was an important departure from the traditional pattern wherein the care of the dead was left to the church (French, 1975). Mount Auburn Cemetery was founded by a private group who joined with the Massachusetts Horticultural Society to acquire a 72-acre tract along the Charles River (French, 1975).

The spread of the rural cemetery movement stemmed from a number of historical developments, not the least of which was general public concern with health and sanitation in developing urban areas, stimulated in part by the yellow fever epidemics that occurred in Boston, New York, and Philadelphia in the late eighteenth and early nineteenth centuries. Throughout the Colonial period in the northeast, cemeteries had been sited in the center of towns; yet they were typically neglected places, and they became increasingly viewed as unhealthy places.

An important element of the rural cemetery was a plan that included carriageways, footpaths, and individual family plots that could be fenced. Mount Auburn required the use of stone grave markers, except that slate, a traditional material for gravestones, was prohibited. Security staff was also hired to protect the cemetery property from the unauthorized exhuming of corpses for anatomical study (French, 1975; Sloan, 1991). A major inspiration for the rural cemetery movement in America was the opening of the Cemetery of Père LaChaise in Paris in 1804. Père LaChaise was the first municipal cemetery to be designed as a picturesque landscape garden, and it quickly became a favored burial place for the Parisian elite. The founding of Père LaChaise was largely a response to the overcrowding of the existing churchyard cemeteries that had led to dangerously unhealthful conditions. Scientific discoveries in the 1770s led to a new awareness of the mechanisms by which diseases were transmitted. Many urban cemeteries had become so overcrowded with rotting corpses that they became recognized as public nuisances, providing impetus for the creation of new burial places outside the rapidly developing urban centers. The new rural cemeteries were sited outside of existing urban centers, but at the same time they assumed a greater role in civic life. Designed as "fields of rest," the rural cemeteries incorporated new ideals of the landscape garden, offering panoramic views, fresh air, sunshine, and intimate spaces where one could rest and contemplate nature and commemorative monuments that expressed society's highest ideals (Etlin, 1984).

After the establishment of Mount Auburn in 1831, Laurel Hill was established in Philadelphia in 1836, followed by Greenwood Cemetery in Brooklyn, New York, in 1838. Both were designed on the Mount Auburn model, with large tracts overlooking a body of water. The movement spread quickly to other American sites in the Northeast and Midwest. The Père LaChaise model achieved its greatest popularity in Philadelphia, where nearly 20 new rural cemeteries had been established by 1849. The new rural cemeteries became so popular that they shaped the emerging ideals of urban design by providing an impetus for the creation of large urban park systems. Andrew Jackson Downing, America's first important landscape designer who popularized the rural Picturesque style of domestic architecture, was profoundly influenced by the ideals expressed in the garden cemeteries (Etlin, 1984; French, 1975; Whiffen and Koeper, 1981).

At the same time the new rural cemeteries were becoming popular in America, garden cemeteries were also being established in Western Europe. In Great Britain, the Père LaChaise model was emulated in Liverpool's Low Hill General Cemetery, established in 1825, followed by the spectacular Necropolis in Glasgow, laid out in 1833. In London, the first important garden cemeteries were the All Souls Cemetery at Kensal Green, established in 1833, and the Abney Park Cemetery, established in 1840 (Etlin, 1984; French, 1975).

The Romantic fascination with natural landscapes suffused with ancient and exotic elements was directly expressed in the rural cemetery movement. Egyptian obelisks, gates, and other symbols of death were among the most common statuary subjects. Some of the new rural cemeteries eventually became so densely crowded with memorials that they appeared as statuary gardens, which was an important impetus to the development of American sculpture. The new cemeteries, both geographically and philosophically removed from their previous sites in densely crowded urban areas, typically offered a carefully landscaped, naturalistic settings

that were sought out and enjoyed by the public (Bell, 1990; French, 1975; Sloan, 1991). In Britain, the adoption of Egyptian obelisks and iconography associated with death, along with the importing of nonlocal granite and marble, represented an unusual reversal of influence from the colony to the state (Mytum, 2003).

The Archaeology of Historical-Period Cemeteries

There is a vast literature, much of it available in the "gray literature," on the archaeology of historical-period cemeteries. Some of the pioneering studies in historical archaeology have focused on mortuary behavior, and these studies have included both aboveground studies of gravestones as well as actual excavations of cemeteries. Deetz and Dethlefsen's (1971) examination of stylistic change in New England gravestones firmly established mortuary behavior as an important avenue of inquiry in historical archaeology and demonstrated the complexity of the issue. Much of the archaeological work done in the United States in the past several decades has been undertaken in the context of compliance with Section 106 of the National Historic Preservation Act, enacted in 1966, but subsequently amended. But beyond the federal, state, county, and other jurisdictional regulations and ordinances that govern the treatment of historic properties, archaeologists are now being called on more frequently to perform disinterments, a duty that was formerly handled by undertakers. Publication has not kept pace with the number of cemetery excavations, but they have contributed a wealth of basic descriptive information regarding the archaeology of historical-period cemeteries, including siting factors, coffin styles, osteological data, and regional and ethnic differences. While many of these studies have been indexed in Bell's bibliographic survey of historical-period cemeteries, much new information has become available since it was published in 1994.

There have also been important theoretical advances in the past two decades. Much of the research conducted in the 1970s and 1980s was influenced to some degree by the processual approach espoused by the new archaeology. Perhaps the most influential collection of papers and theoretical statements pertaining to mortuary behavior done under this paradigm is Brown's (1971) edited volume *Approaches to the Social Dimensions of Mortuary Practices*, published in the Society for American Archaeology's Memoir series. As many researchers have pointed out, however, the models and theoretical frameworks put forth in Brown's volume were derived primarily from preindustrial societies, specifically the assumption that social rank or status is directly expressed in mortuary ritual (the "Binford-Saxe approach"; Binford, 1971; Saxe, 1971). These models, as many adherents of the postprocessualist, structuralist, and symbolic schools have pointed out, are not wholly relevant for the study of industrialized, capitalist societies. Indeed, historical archaeology in general and the archaeology of historical-period cemeteries in particular have both benefited from and contributed significantly to the recently emerging schools of thought in other archaeologies and disciplines (see Chapman, 2003).

The cliché that cemeteries have more to say about the living who create them than the dead who are buried in them obscures the theoretical complexity of approaches to mortuary behavior. The assumption that higher levels of expenditure on mortuary display and grave goods are afforded to individuals of high status has been challenged most effectively by archaeologists who believe that mortuary ceremonialism must be viewed in terms of its ideological expression of the sociopolitical system. Hodder, who has stated this postprocessualist position most effectively, argues that material culture has an important symbolic content and that this content provides an important instrument for the expression of power relations between diverse individuals and groups within a world system (Hodder 1982, 1985).

As the postprocessualists point out, it cannot be assumed that the power relationships inherent in the hierarchical social structure of capitalist society are *directly* expressed in mortuary ritual. Hodder argues that the inequalities of a hierarchical sociopolitical system may be expressed in mortuary ceremonialism either by (1) a naturalizing ideology, wherein the inequalities of access to wealth and power are represented as an inherent characteristic of nature, or (2) a masking ideology, wherein the

inequalities within a hierarchical system are denied or obscured through ritual or through a uniformity of material culture (Hodder, 1982, 1985). This argument expresses one of the fundamental tenets of postprocessualism and symbolic archaeology—that the meaning of objects is not inherent, but derived from association and use in different social contexts, and that individuals and groups with different values, expectations, and access to power actively reinterpret and renegotiate their roles, providing impetus for historical change.

Brenner's (1988) study of the burial ceremonialism of southern New England Native American groups illustrates the important theoretical insights of the symbolic and postprocessualist schools. Colonial expansion had produced a high level of political and cultural instability among Native American groups during this period, and Brenner was able to document significant changes in burial ceremonialism through analysis of a large sample of mortuary sites dating from the late prehistoric period through the seventeenth century. Noting that trade goods—particularly brightly colored clothing, beads, and nonutilitarian brass and copper objects—were often given a symbolic importance and used to mark political power within Native American groups, Brenner (1988) raised the issue of why such goods were disposed of at death when they could have been retained and used as a claim to status by the next generation. During the period under analysis, the Native American cultures evolved from egalitarian bands with mobile membership to more highly ranked groups that were able to form alliances and act in concert with regard to Colonial groups. Brenner observed that burial ceremonialism became intensified during this period, and concluded that the more prominent use of trade goods assumed an increasingly important role in representing political and social relations. In a historical setting where power relationships were becoming increasingly important, the use of highly valued trade goods in funerary contexts was a marking strategy, where political and social roles were clearly and overtly expressed.

Site 7S-F-68, a small family cemetery in rural Sussex County, Delaware, provides a good example of the traditional American Colonial mortuary practices (LeeDecker et al., 1995). Site 7S-F-68 was a small burial plot that contained a total of nine individuals, most likely interred during the period from 1752 to 1799. Mortuary behavior, as determined from siting of the burial plots, treatment of the deceased, and coffin styles showed a strong continuity with traditions that had their antecedents in Europe. The rural areas of the Middle Atlantic colonies exhibited a dispersed settlement pattern and the use of small family burial plots was a common practice. Located on a slight ridge of well-drained soil surrounded by an expanse of low-lying topography, the Site 7S-F-68 cemetery conforms to a general locational model that applied in the surrounding region and throughout the Middle Atlantic colonies (Stilgoe, 1978, 1982). In rural Delaware, the use of small family burial plots persisted until the mid-nineteenth century, and these small burial plots were typically located on high ground within a broad semicircle to the rear of the farmhouse and away from the principal road upon which the farmstead was sited (Bachman and Catts, 1990).

No evidence of grave markers of any kind was found at the Site 7S-F-68 cemetery, although it is possible that such markers may have been removed when the area was cultivated during the late nineteenth and early twentieth centuries. Given the scarcity of stone in the Coastal Plain region surrounding the site, it is most likely that burial markers would have been made of wood. Shroud pins or evidence of their use was obtained from six of the nine burials, and only one of the burials, an adult male, contained any evidence of clothing, that being eight copper buttons that may have belonged to a jacket. All interments were laid out according to the traditional alignment of the body, with the head to the west and the feet to the east. Two clusters of interments were apparently kin groupings, and a few appeared to represent isolated individuals unrelated to the primary kin groupings (LeeDecker et al., 1995).

The findings of the Binghamton Gravestone Project (McGuire, 1988) provide another example of the interplay between ideology and mortuary behavior. McGuire studied 27 cemeteries located in Broome County, New York, that were used during the nineteenth and twentieth centuries. Data were collected from more than 2,000 gravestones, together with information from city directories, census records, and obituaries. For most of the

sample, information was available pertaining to the deceased's ethnic affiliation, residential location at the time of death, and occupation, as well as the deceased's relationship to adjacent interments.

McGuire observed that community graveyards or churchyard cemeteries were typical for Broome County through the early nineteenth century. The rural cemetery movement, which began to spread through the Northeast in the nineteenth century, did not manifest in Broome County. Instead, a new type of burial place, described as a lawn-park cemetery, appeared in the 1860s. This lawn-park cemetery, which continued as the model in Broome County through the 1930s, incorporated some features of the typical rural cemetery, such as ostentatious monuments and family-owned plots, but it did not attempt to recreate a natural landscape. Much more elaborate gravestones became the norm during the late nineteenth century, along with larger, more ornate family mausoleums. In this period, a direct relationship between mortuary investment and status was clear. Construction of expensive family mausoleums peaked during the 1920s and 1930s, a period when a general reorientation of mortuary behavior began to occur. Among these changes were a shift to less-elaborate monuments, replacement of the family plot or mausoleum by small plots for married couples, and an increase in cremation, rather than casket burial.

McGuire concluded that the Broome County cemeteries were landscapes intentionally created to display certain elements of culture and ideology. The simple churchyard and community burial grounds of the early nineteenth century expressed an ideology of egalitarianism, in effect denying or masking the existence of social inequalities that were undeniably present in the developing capitalist society of the day. By the late nineteenth century, this egalitarianism was replaced by a philosophy that glorified individual achievement and success, which was directly expressed in the elaborate burial monuments and family mausoleums that filled the lawn-park cemeteries. McGuire observed that significant changes in the capitalist economy occurred in parallel with the changing cemetery landscapes, particularly the rapid growth of industrialism in the late nineteenth century and the labor unrest and rise of unions in the early twentieth century. He concluded, however, that mortuary behavior could not be linked directly to changes in the capitalist economy, but rather to more generalized social attitudes and cultural patterns (McGuire, 1988).

Excavation of the Weir family cemetery in Manassas, Virginia, provides another example of how mortuary behavior may reflect complex cultural and historical processes that use material culture to express ideology and status (Little et al., 1992). At this site, archaeological excavation provided information not only on coffin styles, burial monuments, and methods of interment, but also allowed osteological analysis to assess health conditions, as determined from nutrition and dental care. The Weir family cemetery was used between the 1830s and 1907, and the date of interment was known for nearly all of the 24 interments. Historical sources established that the Weirs were a wealthy plantation family, and the osteological analysis indicated better dental care and nutrition in comparison to other contemporary populations. Four distinct periods of use were determined from analysis of the material culture: 1830s–1842, 1852–1862, 1867–1870, and 1886–1907. Interments from the first period were characterized by relatively plain coffins in the traditional hexagonal style. Coffin decoration increased during the second period, peaking in the years immediately after the American Civil War. The trend toward increasingly elaborate coffin styles was linked to the Beautification of Death movement, which reached its peak expression in the 1860s and 1870s. The final period of cemetery use was characterized by a reversal in the trend toward elaborate grave decoration, although the historical records indicated that the Weir family maintained their high status through this period.

According to Little and her colleagues, the shift away from elaborate mortuary display that occurred at the Weir family cemetery in the late nineteenth century embodies the cyclical quality of status display, wherein the elites "change the rules" after emulation by nonelite groups reaches a certain point. A pattern of elite innovation and nonelite emulation is operative through the entire cycle of elaboration. After a period of increasingly elaborate display, the point of saturation is reached, and the competition from nonelite groups became untenable. At this point, understatement became the preferred expression of elite status (Little et al., 1992).

Competitive emulation of elite behavior is one of the major themes that archaeologists invoke to explain historical changes in consumer behavior, including elements of mortuary behavior, particularly the use of more and more elaborate monuments and caskets. Cannon (2005) has examined this process from a feminist perspective and presented convincing arguments that women have been important agents of historical change in a variety of cultural contexts. Elaborating a linguistic model that showed a tendency for women to lead men in the adoption of new, prestigious variants of language, Cannon identified the same class-based process whereby emulation of the elite led to increasingly ostentatious monuments, eventually reaching the point of saturation in the late nineteenth century. Based on analysis of monuments from 50 villages in southern Cambridgeshire, England, she was able to determine from the gravestone inscriptions whether the selection of the monument was made by a man or a woman, and thereby conclude that women were ahead of men with regard to the changing fashions of monument style. The detailed records available to Cannon for Victorian England clearly demonstrated the importance of individual agency in effecting cultural change, and she argues that women played a similar role in other cultural contexts, including the sixteenth- and seventeenth-century Seneca of New York, early seventh-century Anglo-Saxon England, and Early Bronze Age central Europe and Denmark.

Excavation of the Uxbridge Almshouse Burial Ground (Bell, 1990) provides an additional example of the competitive emulation model in nineteenth-century mortuary contexts. The Uxbridge Almshouse Burial Ground was a paupers' cemetery located in southeastern Massachusetts, where excavations removed a total of 31 nineteenth-century interments. The cemetery was used only for burial of individuals of the lowest social and economic classes, and some of the grave markers were nothing more than rough fieldstone slabs or granite quarry spalls. The discovery of decorative coffin hardware, one of the expressions of the Beautification of Death movement, was initially viewed as an anomaly in the context of a paupers' cemetery. However, the frequent association of decorative coffin hardware with pauper burials forced a reexamination of the assumption that elaborate coffin hardware was used to mark high-status interments. Decorative casket handles, nameplates, escutcheons, and tacks were used in the late eighteenth and early nineteenth centuries exclusively on the most expensive burial containers, which were generally available only to the elites. However, by the late nineteenth century, technological advances in metal casting and mass production made these items widely available. Bell observed that decorative coffin hardware has been widely reported from late nineteenth-century sites throughout North America, and its use at Uxbridge Almshouse demonstrates how material culture that was available only to the elite ultimately became available to consumers of virtually all socioeconomic levels. Bell's research at the Uxbridge Almshouse supports the competitive emulation model and demonstrates that the trappings of the Beautification of Death movement had reached a socially marginal group in the late nineteenth century. As such, it also illustrates the fallacy of attempting to interpret socioeconomic status from a narrow class of material culture (Bell, 1990).

Parker Pearson (1982) used an ethnological approach to characterize English mortuary behavior of the modern period, wherein archaeological data are entirely lacking, relative to the Victorian period, when the Beautification of Death movement reached the height of its expression. Parker Pearson's theoretical position was grounded in the post-processual school, and he argued that mortuary ritual communication serves to "naturalize" and legitimate the hierarchical social order, which otherwise would be unstable. Parker Pearson's study focused on Cambridge, England, and he was able to obtain data for 277 deceased individuals out of a total of 3,000 who had died in 1977. The data showed no correlation between the social standing of the deceased and the cost of the funeral, a fact that was confirmed by interviews with a number of informant undertakers. The data did reveal some distinctive mortuary practices associated with Catholics and with certain ethnic groups (Polish, Irish, and Italian) as well as gypsies and showmen.

Tracing the development of English mortuary practices through historical sources, Parker Pearson (1982) observed that while overt self-advertisement and status display peaked during the Victorian period, a number of important trends that became dominant in the twentieth century actually

originated at this time. Overall, twentieth-century mortuary behavior was marked by a decline in overt status display, which is perhaps best exemplified by the increasing popularity of cremation. In the modern period, elaborate funerals and monuments are no longer considered tasteful by the elite. Material culture has retained an important role in status display; however, this is no longer accomplished through mortuary ritual, but through other venues such as residences, automobiles, foods, personal possessions, and clothing. The campaign for cremation in Britain began in the 1870s, as an effort to reduce the expense of funerals and to introduce a hygienic method for disposal of the dead. The practice of cremation goes against the traditional Christian doctrine of the Resurrection, and Parker Pearson views the modern popularity of cremation as evidence of replacement of religion as an agency of social control by the new agencies of science and rationalism.

Historical and archaeological investigations at the Newton Plantation provided an important body of data pertaining to slave life from the mid-seventeenth century through the early nineteenth century (Handler and Lange, 1978). Newton Plantation is located on the southeastern Caribbean island of Barbados, and the investigation included archaeological excavation of a slave cemetery and historical and ethnographic research. The cemetery was unmarked and unknown except to a few elderly informants, and it ultimately yielded a total of 92 interments. Dating of the burials was tenuous; nonetheless, general periods of interment were established from stratigraphic evidence and from a few tobacco pipes, ceramics, and other datable artifacts. The excavations did provide extensive descriptive information regarding slave burial practices, including coffins, coffin hardware, clothing, orientation of the corpses, grave goods (beads and bracelets), and distinctive methods of treatment of the dead. Skeletal material was very poorly preserved, but sufficient to identify a distinctive pattern of dental alteration (filing of incisors) that was assumed to be associated with the original slave population.

Many of the mortuary patterns observed at the Newton Plantation slave cemetery were similar to those of traditional Christian practice, specifically the east–west orientation of the interments. However, a number of traits associated with a distinctive African mortuary complex were also identified, primarily through ethnographic research. Handler and Lange argued that mortuary behavior was an important element of slave culture, which itself comprises a broad ideological and behavioral system. The greatest frequency of African traits was observed for the earlier period of the cemetery's use, when it was assumed that the interments included a high proportion of African-born individuals representing a very diverse gene pool. The later period of cemetery use exhibited more European influences, when the interments would have been Creoles (Handler and Lange, 1978).

The First African Baptist Church in Philadelphia cemetery in Philadelphia embodies another example of the survival of non-Christian, African American mortuary practices, but in a nineteenth-century urban context (Parrington et al., 1989). This cemetery was used from ca. 1823 to 1842, after which it was virtually forgotten until its unexpected discovery during construction of a railway tunnel. The site yielded a total of 140 burials representing an urban African American population. Although a number of the burials had been disturbed, the skeletal material was sufficiently well preserved to allow analysis of the population's demography and health. The mortuary patterns exhibited a number of similarities with traditional Christian practices, particularly the alignment of the interments with heads to the west. Coffin preservation was fair, and nearly all identifiable examples exhibited the traditional hexagonal shape, with both flat-lidded and gable-lidded styles. A number of distinctive African mortuary practices were evident, such as the placement of a single coin near the head, the placement of a ceramic plate over the stomach, and the placement of a single shoe in the coffin. While most of the individuals were interred in a supine position, at least one had been placed in a semi-prone position, which showed a possible linkage to folk beliefs concerning the supernatural (Parrington et al., 1989).

Analysis of eighteenth-century Narragansett, Rhode Island, plantation burial grounds reveals another example of how mortuary behavior is used to perpetuate in death a pattern of ethnic segregation that began during life. Noting that spatial segregation was an important element of the relationship between slaves and their masters, Fitts

(1996) has drawn attention to the ways in which slaves' status was marked by mortuary ritual. Most eighteenth-century plantations and homestead farms in southeastern Rhode Island had small family burial plots where members of the white families were buried together with their slaves, although spatially distinct areas were maintained for the white families and slaves. Slaves were commonly buried outside the primary burial area that was delineated by walls, fences, or hedges, and their inferior status was marked by the style of burial marker, which was generally a simple, unadorned tombstone (Fitts, 1996).

Jewish cemeteries in American midwestern cities also demonstrate the importance of ethnic factors in mortuary behavior. Using an ethnoarchaeological investigative approach, Gradwohl examined cemeteries associated with various Conservative, Orthodox, and Reform Jewish groups in Louisville, Kentucky, and Lincoln, Nebraska. These cemeteries dated to the late nineteenth and early twentieth centuries, and they expressed some of the features that characterized general American mortuary behavior during this period, such as the rural landscape design for the cemetery as a whole, the erection of large family monuments, and the use of family mausoleums. The appearance of mausoleums was one of the more anomalous features that would appear in a Jewish cemetery, as Jewish custom dictates that the deceased be buried; mausoleums, however, did not appear in the cemeteries used by Orthodox Jewish groups.

The use of a separate burial area was one of the means by which Jewish groups marked their ethnic identity, and the cemetery's physical separation was most clearly marked for burial places used by Orthodox groups. There were other important differences among the subdenominational burial areas. While the gravestone styles used in all Jewish cemeteries were comparable to those in the broader American society, there were differences in the use of explicitly Jewish symbols and in the languages used for inscriptions. Jewish symbols such as the Star of David, the Torah, and the menorah were common in Conservative and Orthodox Jewish cemeteries, as were inscriptions written in Hebrew, Yiddish, and German, but these features rarely appeared in the cemeteries used by Reformed Jewish groups. The cemeteries expressed the unique historical origins and distinct patterns of ritual and theology associated with the subdenominational groups, and thereby served as a marker of ethnic affiliation (Gradwohl, 1993; Gradwohl and Gradwohl, 1988).

Jordan's (1993) study of Texas graveyards illustrates a number of important points about ethnic and regional diversity. This study provides a wealth of detail about burial practices associated with different ethnic groups, including Hispanic, German, and traditional Southern culture, which reflects influences from southern Appalachian, southern Anglo-American, African American, and Native American cultures. Focusing on the cemeteries of east Texas, Jordan has documented a number of distinctive behaviors seen in the cemeteries used by the various ethnic groups who began to populate this region in the nineteenth century. These include maintenance of the graves by periodically scraping and mounding soil onto the grave; decoration of graves with distinctive artifacts such as shells, light bulbs, and shrines; the use of distinctive types of grave markers; and various patterns for spatial arrangement of the interments. One of Jordan's most important observations is the persistence and continuity of ethnic folkways in mortuary contexts, particularly in rural areas, long after the assimilation of these subgroups into a dominant national culture.

Conclusions

A number of phenomena associated with mortuary behavior became manifest in the nineteenth century during the Beautification of Death movement. New attitudes and cultural norms were expressed in a number of important ways. Earlier, traditional methods for treatment of the dead—burial of the corpse in a simple cloth shroud and a plain hexagonal wooden coffin—were replaced by much more elaborate funerary practices. By the end of the nineteenth century, it was common to bury the dead in their best clothing, and the traditional hexagonal coffins were replaced by much more elaborately constructed and decorated vessels that were designed to preserve the physical remains of the deceased as long as possible. New, elaborately

landscaped burial grounds, often built with private or municipal sponsorship, gained in popularity at the expense of crowed urban churchyards and rural family burial plots. The rural cemetery movement, which began in the major urban centers of Western Europe and northeastern North America, featured the creation of new landscapes that embodied a romanticized ideal of the natural landscape and served as a setting for elaborate monuments that announced the achievements and material success of anyone who could afford them. Even for the most marginal and dispossessed strata of society, the notion of a proper burial was colored by the ideals expressed in the Beautification of Death movement (but compare the findings of Bromberg and Shephard [2006] at the Quaker Burying Ground in Alexandria, Virginia, where the evidence suggested an apparent refusal by that religious group to participate in the conspicuous consumption of the mainstream culture). At the same time that these monuments and landscapes became a form of conspicuous consumption, they also reflected a shift in the nature of the emotional bonds between the living and the dead.

As an important facet of a culture's worldview, mortuary behavior and the attendant material culture are specific as to time and place, and vary according to regional and ethnic factors, changing notions of taste and fashion, religious traditions, and folkways that have persisted for centuries and millennia. Individual choices made within that context may also vary significantly according to gender. With the ability to draw from a wealth of texts and material culture, historical archaeologists have made some of the most important theoretical contributions to the study of mortuary behavior. It is impossible to understand the changes in mortuary behavior that accompanied the expansion of urbanism, industrialism, and consumerism without appealing to the post-processual notions of how material culture is actively used in a symbolic sense as a means for individuals and groups to actively negotiate their social position.

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Making Historical Archaeology Postcolonial

Mark P. Leone

Introduction

How do we deal with the cynicism behind the politics of both intellectual liberals and conservatives today? How do we make an archaeological science that is empirical, yet also is believable to people who think they know that most of the knowledge that is available might not be believable?

How do we approach the realities of our lives today and say something that is not flimsy and is not readily absorbed by a society so cynical that our work has no impact?

How, in other words, can we be outside ideology for very long? There may be a way. We must try to find one, and we can refer to several scholars in our midst whose work helps us.

I refer to the struggle in historical archaeology to move our excavated data beyond the point where scientific discussions of it are tedious and appear on the surface to be unconnected to important problems. Our struggle is accentuated by newspaper and television accounts of archaeological discoveries, which are presented as captivating, pertinent, and essential to knowledge. This disconnection is between what many of us find to be things so small they should remain forgotten and our exclusion from the kind of archaeology that makes news.

Slavoj Zizek (1989) helps us to deal with our sense of objects. It is simple enough to begin with the agreed upon assumption that we see objects as being apart from ourselves. We all believe this until we read postmodern thought and realize that the measures we have and use to understand that which is outside ourselves organizes and defines the world. They do, but they also create value for the world. So by this date in anthropology, we are almost all used to the idea that we as analysts have a substantial role in identifying and interpreting data and thus conclusions. This used to come as something of a revelation, as well as a conundrum, because we see objects, both things and conclusions, as separate from ourselves. There is nothing new here, and I mention this just to get started.

But how separate are we as individual scientists from the objects we work for? Those objects tend to be of ultimate value: scientific truth, referenced journals or peer publications, science news, the government regulatory agency, museums, the university, the anthropology or archaeology department, and ultimately, the state or some institution independent of the object, but whose legal existence ultimately depends on it. We believe in these objects. They are apart from ourselves, embody our highest values, our greatest goods, and we believe they have a life apart from us. We also assume them to have a greater knowledge about the world than we ourselves possess as individuals.

This definition of object contains the assumption that explains our relationship to the state and tells

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us about its source of authority. We see the state as apart from us and as an object of our attention. We also assume, as Zizek (1989) notes, that the state understands us and is sympathetic to us. We attribute great knowledge, even prescience, to the state and its institutions. This transference of knowledge and understanding is false insofar as knowledge and understanding are based on facts, but, nonetheless, is so as a tendency among object relations. Zizek says that this transference relationship is the initial and lasting basis for the state's authority.

It is this tie that Althusser writes about as ideology, and it would be antecedent to his definitions of givens and taken-for-granteds that hide the operations of the state. Althusser's notions help us to understand why we see ourselves as independent of the state, but Zizek precedes this with his idea, borrowed from Freud, that humans begin with unconscious ties that grant not only independence to objects, but also create belief that objects may be above the ordinary senses—they may be sublime. That is, they know more than we do. I would like to challenge these assumptions so that we clarify our true relationship to objects and, thus, to changes in our relationship to authority(ies).

I argue that the problem for us as historical archaeologists is to define how the objects that we see, quite incorrectly, as apart from ourselves, actually work. These objects can be found more easily, using Foucault (1979), who helps us identify the routines of capitalism and colonialism, some of which are called technologies of the self. Foucault means the methods of counting, reckoning time and space, reading, printing, speaking, all forms of mapmaking, music, using precedent, labeling gender, age, race, and routines for inflicting punishment. We need to see heritage as an object of the state, and the names and directions of our emotions, particularly regarding the past, as our object and problem.

Matthew Johnson and the Archaeology of Capitalism

Since the early 1990s, Matthew Johnson (1993, 1996, 2006) has been an important voice for general thought about historical archaeology in England. Johnson (1996) solved three problems that bedeviled a field founded, defined, and dominated by North Americans, but which has now spread and is vital in South Africa, Canada, Ireland, and Australia. First, Johnson identified a large range of material culture that could be analyzed by a historical archaeologist. Second, he moved historical archaeology's subject matter from the European colonies into Europe. Third, he focused historical archaeology directly on capitalism.

Like a few other archaeologists, Johnson saw the three-dimensionality of things somewhat differently from North American historical archaeologists. He was not bothered by whether something was broken or whole, and also saw a map and an illustration as part of, not as a supplement to, his subject matter. Whole houses, not just foundations, and whole landscapes, not just backyard dumps and privy holes, became his subject matter. Just as Deetz (1977, 1996) made no conceptual difference between gravestones, dishes, and house floor plans, Johnson built an analysis of early modern England out of all things that transformed English late medieval society.

The founding of historical archaeology in North America included several definitions but, most prominently, it was directed toward European expansion or European colonization. The aim was to take on the worldwide, and therefore universal, effects of Europe's domination of the globe. This definition of historical archaeology did not include studying Europe itself.

To change this, Johnson focused on the transformation of the populace, the countryside, the economy, and the world of work and family (including religion) in England. He called this study in English culture the "archaeology of capitalism," by which he meant the organization of society, including how people saw each other and themselves. Therefore, he worked at understanding the same world in which David Hurst Thomas's Spanish missions and Stanley South's Spanish forts existed. He dealt with the apparatus of using land, buildings, maps, religion, families, and individuals to create productive, early modern workers. He did what Deetz (1977) had done for New England, but Johnson had a far clearer eye for economic and political consequences. He reached this position by using

the principles of E.P. Thompson and Foucault and concepts linked to Marx. Johnson is not a leftist thinker himself, but I am not misrepresenting him in my brief characterization.

Although Johnson never used the term "internal colonialism," the analytical result he achieved is the same. He showed that the processes of class, work, industry, and profit making—as these were expressed through housing, land ownership, machinery, and table manners—were not different from those used in colonial North America, Australia, North Africa, the Caribbean, or South Africa. So Europe, therefore, was a part of the subject matter of historical archaeology, because what happened there became both the point of origin and the practice field for what happened in each and every colony of Europe.

Johnson saw context, meaning, behavior, impact, habits, and routines—or, as Foucault (1979) put it, the technologies of the self—as central to our study. Even though Foucault was only present indirectly throughout *An Archaeology of Capitalism*, the use of his definitions for understanding the reshaping of daily life from the viewpoint of power had a great effect on Johnson's text.

Braudel (1979), directly influenced by Marx, is ever-present in Johnson's book, even though Johnson eschews Marxism. Braudel and Foucault dwell on and utilize material culture in the era of the founding and creation of new nation-states, including their central emphasis on the emerging idea of citizenship. Both Braudel and Foucault show us the role that things have in a society ruled by class, profit, machinery, violence, and the unlimited search for resources and markets.

Finally, I want to draw on Johnson's pride in England, the emergence of the modern nation under Elizabeth I, and the Reformation that produced the English Church. You can catch Matthew Johnson's national pride in his writing. You can notice his feeling. I argue that the emotions behind such particular viewpoints are givens in any writer's life and, if noticed and developed carefully and consciously, can be fostered as potentially productive starting points for any scholar in our field. Carmel Schrire (1995) has become the master of using this insight.

Carmel Schrire and the Archaeology of Racism

How does one create a model for generalizing work out of one's autobiography and then use it to study nationalism, capitalism, and colonialism? The best place to look is Carmel Schrire's *Digging through Darkness* (1995). She writes about the colonial destruction of native peoples in South Africa and Australia both by ecological degradation of the environments and economies of native people and through the rampant racism and genocides that accompanied European colonialism. Schrire uses archaeology to show the severe environmental destruction introduced through Dutch military and agricultural practices in seventeenth-century South Africa. She carries out the same investigation in Australia. In addressing racial hatred, she not only moved beyond the narrow limits set within North American historical archaeology for her and everyone else, but also offered a far more significant role for the field.

Schrire grew up in South Africa and earned her doctorate in Australia working with aboriginal peoples. She had been introduced to archaeology in South Africa as a child. Schrire writes first hand about racial hatred to herself, in South Africa toward native peoples as expressed through apartheid, and to aboriginal peoples in Australia. One is deeply moved by the European savagery to native peoples she describes. It is not only clear who the savages are, but it is also clear that there is still active destruction when Europeans impose terms like "primitive" on native populations, a point also made by Castañeda (1996). Schrire describes the conditions that surrounded her as she grew up, gives them an origin, and tells us how the modern condition came to be, both in South Africa and Australia. It is effective historical archaeology.

If Matthew Johnson uses his pride in England to analyze the emergence of capitalist practices, Schrire uses her sense of injustice and anger about them to start and propel her book. However, she is far more visible about her motivation than he is, and she uses it to shape the rhetoric of her science. I contend that this very same set of feelings is one of the reasons historical archaeologists now argue that one of our field's goals is to give voice to the voiceless.

Giving voice and validation to the despised, names and labels to anonymous people, and votes to the disfranchised is the focus of much of historical archaeology. Ultimately these objectives correct injustices. No one thinks the forgotten are forgotten by clerical error. They are forgotten because they were said to be dangerous, inconvenient, numerous, aggressive, controlled land or resources that others wanted, or were the laborers whom others sought. One basis for historical archaeology is the correction of injustice and behind that is the anger that such an injustice has existed and continues.

Accompanying these feelings are others, including pride in democracy, such as Johnson shows, and a deep sense of urgency that democratic values and processes be fostered. The key to virtually all of Jürgen Habermas's (1984, 1989) work is the idea of enhancing democratic processes. Their extension to exploited peoples is central to maintaining and extending democratic society. This is critically true because democracy when tied to capitalism, particularly late capitalism, guarantees precisely the opposite of what historical archaeology aims to accomplish. Capitalism, as Althusser has shown, and as our own cynicism betrays, is not about enfranchisement, universal protections, widespread guarantees for welfare, historical and social legitimacy, or people's pride. Its vehicle is class and class protections. Its heritage is violence. That violence occurs through the technologies of the self, which can be exposed through the material culture of their imposition. The ultimate technique that we must be aware of is our own confusion between ourselves and who we think we work for, as Zizek (1989) notes. We cannot assume that a sublime object exists. A sublime object is our state, scientific truth apart from politics, or our museums, for example.

Habermas (1984, 1989) argues that democracy embedded within capitalism, as it has come to be in the last 50 years, requires an aggressive expansion of democratic process, or an enfranchisement, to the exploited. I think that is done in some small ways through historical archaeology, but it will be done better if we recognize that the pride in democracy and the anger at the injustices within class relations, which motivates many of us, is supposed to show up in our work. It is already there, it is sound, and it is not unscientific. Schrire (1995) has shown us this because she allows us to understand the look and effect of racial hatred first hand. She brings it to the surface and gives place to named feelings that otherwise would be dismissed as bias.

Naomi Scheman and the Politics of Naming

Feminist philosopher Naomi Scheman (1980, 1983) has developed a position like that of Carmel Schrire, in a structured way. Scheman's position is that members of a particular culture are taught to give names to some feelings and not to others, and this process within European societies is gender specific. She argues that before naming there is emotional incoherence, not latent recognition of articulated feelings called anger, grief, anxiety, fear, and so on. Scheman says that there is a culturally specific lexicon of names for feelings, that these are taught, applied, and used as we grow, and that the appropriate reactions to the names are specific to men and women. Scheman points out that American men are given greater latitude to name, and more importantly, the capacity to act on, feelings. American women are more constrained, she says. That may come as no surprise, but her idea is that feelings are named in socialization, with differentiation by gender. Neither the names for feelings, nor the capacity for acting on them, are born with us.

Scheman is concerned with the power that comes with the ability to impose and enforce definitions on feelings. I advocate against the stand that feelings get in the way of science and should be pushed aside and neutralized. I argue, citing Scheman (1980, 1983) and Schrire (1995), that feelings should be acknowledged, drawn to consciousness, and their existence and force be made productive. Schrire and Johnson, to very different degrees, have pointed the way to doing just that. Behind one of the mottos of the field of historical archaeology—giving voice to the voiceless—is an equally deep emotional commitment that comes either from pride in the democratic processes or outrage at their absence. These feelings and political facts are tied, and should be seen to be, in our field.

They are not tied now because of fear of retribution at the exposure of the appearance of a political agenda. The standard argument says that scientists

neutrally discover truths, letting their objective discoveries show in public light for others to interpret. There is both some truth and a lot of safety in this longstanding, but largely morally bankrupt, position. In the long run there is little real protection in taking it. If one's sense of feeling is apparent at the beginning of a report, transparency results. Transparency does not help or hinder the science, and it does not necessarily have to be stated publicly, but if a practicing scientist knows the origin of his or her own views, everyone is safer. Naming and defining the terms of an investigation preempt anyone else from doing the job, and precludes doing the work of having to reorient names and redefinitions after someone else has tried to compartmentalize an author's work.

Scheman (1980, 1983) argues that the naming of feelings is cultural, and that their use and invocation within a field is legitimate to the actual practice of the field. Such discovery of objects like feelings directs us to the social origins of gender and inferiority that concern us deeply. Naming a feeling is naming a motivation. It is not an easy search and clearly it is both private and occurs in the present. Because naming is cultural, potentially arbitrary, and a function of power, it shapes what can be done with the product of one's work. The process is already at work in our field or we would not be attempting to study the muted, silenced, and enslaved. Nobody wants to be neutral regarding these peoples. Most of us are appalled at how they were and are treated. We already argue that silence and exclusion should be cured. Outrage, pride, and happiness at success are all involved in our effort to extend the politics of democracy.

Quetzil Castañeda and the Archaeology of the Subjects of the Colonial State

Quetzil Castañeda has found the damage done by the use of the concept of culture. I argue that *In the Museum of Maya Culture* (1996), Castañeda makes the case for the importance of historical archaeology. He makes three points that are of use. First, the success of anthropology can be measured by the virtually universal recognition and use of the idea of culture. Second, all kinds of colonial and postcolonial people around the world now look to the concept of culture and find themselves within it, but also often find faded, tattered images of themselves as they used to be. Third, such people never see either an appropriate past or future through the use of the concept. Castañeda creates the term "zero degree culture" for the case of people who are seen by anthropologists and other social scientists, and eventually by themselves, as having lost what they once had, or of not having caught up to what other contemporaries have already achieved.

It is not only that many of the world's anonymous, marginalized, despised, illiterate, powerless, and voiceless peoples are suffering these conditions, it is also the case that the near universal use of the term culture has helped create that condition. This is a serious charge against anthropology, but one with great potential for postcolonial historical archaeologists. Castañeda argues that for most of the twentieth century, anthropologists used a dichotomy in their work that saw a group's integrity as a function of how far from or close they were to the modern world. The primitive, aboriginal, and native worlds had integrity. The modern world was dominant and not an anthropological topic, but rather an anthropological fear. The profession saw that our subject world was in danger of losing what it once had on the way to becoming what the West had achieved. Because the West and modernization were the ideal objects, our discipline produced a colonial subject.

Peasants, the landless, creoles, campesinos, slum dwellers, migrants, the nonliterate, the detribalized, the dispossessed—all had lost some or all of their culture, usually unwillingly, and had not yet been integrated into some version of Western culture. Not able to go back, many had not yet "chosen progress." Therefore, to use Castañeda's term, they had zero degree culture because the anthropologist could not find their culture, or much of it. When it could not be found and the nondiscovery was announced, then lo and behold the uncultured found themselves confronted with a credible description of what was missing. Such a discovery became a vehicle in the marginalization or colonial process that is a part of modernization. Anthropology played a role in the creation of the very people and condition that historical archaeologists now claim as their scholarly purpose.

Castañeda not only makes this claim but also argues that mainstream prehistoric archaeology has seriously abetted the process. So does Nadia Abu El-Haj in *Facts on the Ground* (2001). Castañeda is primarily concerned with the role of a grand archaeological site like Chichén Itzá in the process of defining the people who now live around it. His is a ethnography of a tourist zone whose main physical attraction was created by archaeologists, but he utilizes many of the insights into nation building provided by Benedict Anderson in *Imagined Communities* (1991) to build his interpretation. When Castañeda and Anderson are used together and are focused on characterizing and defining archaeology, the result is our opportunity as historical archaeologists for knowing the voiceless.

Discovering a Vocal Past

Here is my argument. The world has many grand archaeological zones created since the eighteenth century for the purpose of showing exalted national origins and of offering proof of such origins to visitors, whom we usually call tourists. This connection of archaeologists and origins created heritage. Anderson (1991) points out what most archaeologists know—the newly discovered heritage was that of the elite and powerful, usually recently emerged. In the act of discovery and interpretation, archaeologists usually came to see that their workers, the surrounding villagers, rural farmers, neighboring herdsmen, and fishermen had a distant, yet undeniable, cultural tie to the ruins. Buried in the behaviors, beliefs, things, and habits of the living was a part of the past seen in the grand ruins. The shadows of great past achievements were there among the living. These shadows were to be drawn out by ethnoarchaeology, ethnohistory, oral history, or some combination of these methods that paid close attention to local native thought. It was assumed that there was a tie, but also an epistemological gulf. The living were not great, but they had been great once. They had achieved, but then they had lost something and no longer had the greatness that they once did.

The creation of a group tied to the ruins as the faded remnants of the once great led to destabilizing knowledge. The new knowledge found by anthropology was consumed by both the colonizer and colonized and produced a group that had no right to the ruins. The descendants, now so faded, could be moved out, their villages bulldozed. They could be provided with little schooling, medicine, roads, land, or income. They could also be despised for being nonmodern, for rejecting progress, and for various primitive practices. They were suddenly voiceless and anonymous. With this process they also become the subjects for historical archaeology. We ought to be able to work with them and find their stories worth listening to. So we have told ourselves.

So where is the object of our work? It is in two places. Most obviously it is in the texts tied to the images of the past found in the newly discovered former glories of a new nation. Heritage is the noble past that all visitors come to see, whether from the capital of the owning nation, or for the travelers who wonder how anyone could achieve such awesome achievements without steel, wheels, or engines. Travelers, of course, begin their journey through texts at home. This is the frequently noted invention of tradition (or heritage) and is an essential part of nation building. Historical archaeologists need to know that the origins of tourism are one preface to our ground for action because it presents a picture of the elite as well as the marginal. This is why we should not be afraid to write for the elite. We should assume we know better than they do.

Our work's second location is marked by the supposed absence of culture among those now marginal to the identity of the nation and its heritage. These are the people whose labor, land, and children are essential to a new economy, but whose vote is not. These are the people who lost out in national emergence, and they are the marginal whom our anthropological field helped to create, and to whom we as historical archaeologists hope to listen. Now we know where to find them, and with the proper conceptualization of democratic speech (Habermas, 1984, 1989) we will not be ventriloquists for them.

Castañeda's legacy, for historical archaeology, is quite positive. Using his critique of tourism at an archaeological locale like Chichén Itzá, we can see that our job as historical archaeologists is to look for the tin cans, nails, nineteenth-century ceramics,

and mass-produced bottles that show the locations, patterns of use, levels of sanitation, water supply, electricity sources, and connections to mass markets that actually characterized those with supposedly faded remnants of the past. We are used to showing combinations of self-sufficiency and integration into international markets. These patterns of consumption and use all show patterns of land use, water savvy, curing, diet and cuisine, cleanliness, family life, and religion.

There is a productive combination of ideas and things for a historical archaeologist if one combines our established work with impoverished communities and Castañeda's critique of the use of modernization theory among anthropologists through the 1960s. Our work on slavery, tenant farms, mill boarding houses, asylums for the poor and orphans, hospitals, factories, kitchens, slums, and the other margins of society all show patterns of culture. We always find patterns of food gathering, use and disposal, room use, curation and discard, self-sufficiency, and market use. We never find people disconnected to the market; there are always levels of market integration. We need to carry this process forward to other colonies in order to counteract the damage done by the idea of zero degree culture, as well as that done by seeing people as remnants.

Pisté: Archaeology for the Colony

Castañeda (1996) describes Pisté, a site whose archaeological characteristics are likely to be easily understandable to us as historical archaeologists. Pisté is the town where the Maya, who sell and work at Chichén Itzá, live. No one in historical archaeology has ever dug there, but we already know its likely array of material culture well and quite likely what it means. Because we know much about Pisté from Casteñada's extensive work there, it might be possible to create an archaeological research design without spending time listening to the needs of the town's people. However, it is better for a historical archaeologist to ask what people want of archaeologists. In my own experience, working with African Americans in and near Annapolis, these are some of their questions to me and my students. Do we have archaeology? Is anything left from Africa? Tell us about freedom for our people! I want to know about slave spirituality! Where are our borders? When was our town settled? All these questions have archaeological answers.

At Pisté, historical archaeologists would use Redfield (1962), as well as the Chicago school's literature and that of the Carnegie Institution of Washington, to make a precise description of exactly what was said about the town, particularly with reference to the connection between its refusal to modernize and its material culture.

There will probably not be a good description of material culture as we need it, but there will be a photographic archive at the Carnegie Institution of Washington of the many towns (including Pisté) in which its members worked. Redfield's papers can be expected to contain descriptions and photos. Raymond Thompson (1958) studied contemporary pottery making in Yucatán and has an extensive ethnographic description and photographic record of villages from the 1950s. In other words, there is a way to obtain a good, systematic survey of the material culture, its structure of use, and its meaning. This can be done chronologically for Pisté and villages like it. This is a historical archaeologist's early move, which will show patterns, organization, market ties, brand use, and a dozen other elements of cultural organization.

Digging in the village will produce a different set of artifacts depending on where the excavation is done. Domestic and commercial sites, a cemetery survey, a road and house map, and a site of a former village will produce a collection that will be different in measurable ways from the historical, ethnographic, archival, and photographic survey. Charles Cheek (personal communication, 1980) dug in a village in Belize occupied by Garifuna, or Black Caribs, and found a collection of European ceramics not much different from a contemporary deposit in Annapolis, Maryland, or Alexandria, Virginia. Thus the proportion of European to local wares, flatware to tea wares, and glassware to storage wares and chamber pots can be constructed. Automatically these artifacts will show trade networks and habits of food preparation, disposal, part of a cash economy, and habits of cleanliness. People so described are hardly nonmodern, resistant to progress, or purely traditional, but our next move

comes from finding out exactly what was not there that should have been there. Given a prior search of the earlier twentieth-century records, we should notice what was in them that came as a surprise given ideas held by people like Redfield, and what was not predicted from the records and photographs that actually occurred archaeologically.

Why the absences and presences that were not expected? Therefore, the two sets of information should be used to query each other. Because Pisté was repeatedly pillaged and harmed, are these events archaeologically visible? If the town had a market economy, does it show? Do its construction history, property lines, sanitation system, utilities, and field systems show? Do traditional Maya pottery, stone tool use, shrines, house shape, cooking patterns, and incense use all show? What is the age of the village, its adoption of new patterns of items, and their chronology of adoption? This village will have a history and a culture through the integrity connected with understanding the use of all these things and by their having a chronology of change. It will certainly not have zero degree culture. Historical archaeologists must be able to comment on how, in local eyes, the people of the marginalized community have integrity. We must be able to comment on how the anthropological notion of culture has been changed by the action of historical archaeology in order to challenge the colonizing object we are contesting. In Pisté, this would take the form of a description of the culture that resisted and modified the colonizing idea of modern Mexico that was imposed after the Mexican revolution.

Presenting Culture

After a description of a culture's integrity and resistance, then what? There should be a public presentation of it. People's pasts are on display as tradition and heritage at historical-period sites around the world, and historical archaeology is one of the main means by which sites achieve their integrity. We know that historical archaeology plays a vital role, particularly regarding monuments associated with a European colonial past. Regardless of the kind of archaeology that is employed to build an interpretation of a monument, all these monuments are modern, and very few even date to the eighteenth century. Therefore, just below the surface of all of them is the historical archaeology of how they were made into monuments, information about those who used to live there, who worked there as laborers, how they lived and were treated, their villages, and their culture. This is where we can also dig.

If one takes a historical-period site, we can connect two processes for ourselves: what the tourist experiences and the impact of tourism on the people who run the site. The best idea to explain why people tour involves reversing alienation. This hypothesis argues that modern work, life, education, and media create a sense of being unintegrated, powerless, and fragmented, or daily lives devoid of meaning, particularly in comparison with what are imagined to be more integrated and fulfilling times. A visit to the places exhibiting an integrated, comprehensive, beautiful alternative is a temporary antidote to alienation. A comprehensive tourist environment with exhibits, guides, reenactors, latter-day natives on display, dioramas, reconstructions, and depictions of various sizes is the vehicle for the cognitive operation of the antidote, or so scholars like Dean MacCannell (1976) argue.

Public Displays of Heritage

Historic monuments do in fact produce a special sense. Christopher Tilley (1999) locates many of the features of this special sense. The three dimensions of a site, in addition to color, form, and visibility from every angle, are inspectability, texture, and openness to weather and changing light. These are the elements of how it affects viewers. Tilley makes a distinction between communication using words (including print) and communication as it occurs with things. He points out that things can be connected to a wider array of intentions than words, and that things can hold more, as well as contradictory, meanings. Things are more ambiguous than words and they are seen differently even by the same person as time goes by and as events change. Things have both an immediacy and a permanence not possessed by spoken words.

These things, when they take the form of monuments, are unusual in being an abnormal, but quite real, environment. They are orderly, uniform, trimmed, and appear to be from another time, yet are lawn covered, mostly empty, and free from ugliness, unpleasant demands, or lots of requests for money. They enforce and reinforce civil behavior including no pushing, gouging, shouting, cursing, and impoliteness to visitors from ticket sellers, bus drivers, and waiters. It is like being in a hotel for viewing history with the viewer at the privileged top.

In such a setting the interpretation of the past is provided by paths, maps, audio guides, guidebooks, tour guides, costumed workers, craftsmen, administrators, movies, postcards, static exhibits, open archaeological sites, art historians, signs, and viewing platforms with directions. These are all texts of various sorts and they are a component of how concrete things are made to communicate meanings.

When combined with rituals of politeness, things work together to make a formal environment. These are sublime objects. They should be our subjects; we should not be the subjects of them. The monument mixes built settings, formal behavior, texts, and emotions. A new meaning can be created, and some new insight or change in one's perceptions can occur. It need not necessarily be permanent, but it can be thorough. This summary contains Tilley's (1999) hypotheses about why tourists seek out heritage sites, why these sites work, when they were created, and why they are so tightly controlled by their administrators and owners.

Given that such sites memorialize elites and exclude everyone else, it is easy to see why marginalized people resent their exclusion, let alone their inclusion, as faded remnants of what was once great and glorious. How are we to communicate the alternative histories, voices, pasts, and viewpoints that we seek to find? Because it is essential that people feel and rationally articulate the tie between who they are and exactly why they are here now, in the condition they find themselves touched by, people seek constant exposure to legitimizing, textured, figured, and refigured pasts. This is an essential part of daily life. People are denied legitimacy, rights, precedent, reasonableness, or identity all the time. And they are not all minorities or those who are marginalized; life in capitalism is hierarchical and constantly renegotiated. Who one is, and, therefore, the rights to which one has access, are immediate and ongoing matters. Because capitalism's relationships are unstable the contest for these does not go away.

Running mentally back and forth between how one is challenged right now and how one tries to cite some legitimizing referent is a constant negotiation. Establishing the apparent nonnegotiables, such as the duration of tradition, occurs through the media. The early aspect of establishing durability by discovering history can occur through scholarship like historical archaeology. But because durability is political, media are involved because these are the vehicles of education, and thus a central part of identity. When the concreteness of things and texts of historical-period sites are combined for the marginal, such people as well as their visitors (tourists) may see daily life in a new way, which we hope and plan will be for the better.

Because we ourselves and our society are within capitalism, colonialism, and nationalism, historical archaeology is motivated by our immediate experiences and can also be used to plumb the origins of these experiences. This is true for both dominant nations and former colonies. Once understood, our self-knowledge can be raised to a level of consciousness by exhibiting material culture in organized settings, which may help produce meanings not hitherto available to those who could use them, both ourselves and others.

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The Current State and Future Prospects of Theory in European Post-Medieval Archaeology

Paul Courtney

Introduction

When the present writer wished to study post-medieval archaeology at university in the 1970s, he found that there were no courses available in Britain. During the last decade, most of the larger British archaeology departments have acquired a specialist in this period. This resulted from an expansion in the university system coinciding with the fashionability of new theoretical approaches espoused by university-based scholars who have emerged since the 1980s, including Matthew Johnson (1995) and Sarah Tarlow (1999). The introduction of developer-funded archaeology in Britain in 1991 has also led to a considerable increase in the amount of post-medieval archaeology investigated ahead of destruction. In Britain and Sweden, post-medieval archaeology has also become heavily influenced by post-modernist theory, resulting in a convergence of approaches and a considerable dialogue with American historical archaeology (Ersgård et al., 1992; Tarlow and West, 1999). Elsewhere in Europe, explicit theory has had little impact on the archaeology of the post-medieval period. This chapter will first examine the varied intellectual traditions that affect post-medieval archaeology as it is currently practiced in Continental Europe, especially the potential for theoretical diffusion from allied disciplines like history and ethnology. Second, it will consider the prospects for a distinctive European (including British) approach to post-medieval archaeology in the face of the global impact of American historical archaeology.

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The Weight of Tradition or Unreleased Potential?

Germany

Against the background of first the enlightenment and later German unity, the expansion and modernization of the German university system provided a model for many other countries. The German-speaking areas of Europe saw major developments in a wide range of academic disciplines that have been crucial to the development of historical archaeology. Of particular importance were German ideas of culture that arose out of the late-eighteenth-century enlightenment and influenced individual researchers in a number of distinct disciplines (Burke, 2004:6–19). German universities saw history develop as a distinct academic profession characterized by an emphasis on the careful analysis of original texts and a belief that the past could be studied scientifically and objectively. This approach was especially associated with the German political and constitutional historian, Leopold van Ranke (d. 1888). He emphasized a synchronic and antitheoretical approach that stressed the specificity of historical events (Burke, 1988; Mawick, 1970:34–38). German and Austrian universities also saw the emergence of art history as a distinct discipline.

The modern academic study of the Italian Renaissance was established by George Voigt and Swiss-born Jakob Burckhardt (Burke, 2004:7–9; Ferguson, 1948:195–289). The nineteenth century also produced two giants of socio-historical, grand theory: Karl Marx (d. 1883) and Max Weber (d. 1920). The latter's *The Protestant Ethic and the*

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Rise of Capitalism published in German in 1905 proved to be an important, if highly controversial, landmark in cultural history (Giddens, 1973; Green, 1959; Weber, 1958 [1905]). The German-born and educated sociologist and cultural historian Norbert Elias (d. 1990) was noted both for the diversity and the unique theoretical slant of his work. He spent much of his career outside Germany but emerged from the tradition of German historical sociology epitomized by Max Weber. Of special relevance to archaeologists is his early work on state formation, court culture, and the rise of civilized behavior or "the reformation of manners" in current parlance (Elias, 2000; Mennell, 1999). Elias influenced such major historico-sociological studies of material culture as Stephen Mennell's (1985) comparative analysis of British and French cuisine and Chandra Mukerji's (1997) analysis of the gardens of Versailles depicting them as a symbol of power of the absolutist and territorial state.

Professional geography was yet another product of the nineteenth-century German university system, beginning with the work of Alexander von Humboldt (d. 1859) and Carl Ritter (d. 1859). The German concepts of cultural and anthropological geography and landscape (*landschaft*) influenced the development of archaeology, anthropology, and geography in many other countries (Dickinson, 1969:22–185; Hartshorne, 1976 [1939]:48–83, 149–174). The distribution map, another development of this tradition, has been central to European landscape archaeology, historical geography, and ethnology. Initially this approach was closely linked to the dominant paradigm of cultural diffusion that pervaded European archaeology and folk studies in the late-nineteenth and early-twentieth centuries (Stoklund, 1983; Trigger, 1989:148–186). The emigration to the United States in 1886 of Franz Boas (d. 1942), a German geography Ph.D., was instrumental in establishing the early theoretical direction of American cultural. He saw cultural traits as the products of both diffusion and local adaptation and was a major critic of unilineal evolution, the concept that all societies evolve through the same stages from savagery to civilization (Kuper, 1999:13–14; Moore, 1996:44–52).

An overlap between geography and ethnology is also evident in the work of Friedrich Ratzel (d. 1904), a major pioneer of modern cultural and political geography. His Darwinian-influenced concept of *lebensraum* (living space) proposed political territories naturally tended to expand into surrounding space (Dickinson, 1969:62–76; Smith, 1980). The sociobiological and nationalistic aspects of Ratzel's *geopolitik* approach were subsequently distorted by Nazi academics to justify Aryan superiority and ethnic cleansing. As a result, academics in post–World War II Germany were slow to adopt ideas of "social space," because of the Nazi resonances of *lebensraum* and geopolitics. Such approaches, utilizing the ideas of scholars like the German sociologist, Georg Simmel (d. 1914) and the French social theorists, Henri Lefebvre (d. 1991) and Pierre Bourdieu (d. 2002), are now widely used by German social scientists (Löw, 2001).

Volkskunde (folk studies) or "European ethnology," as it is now more commonly termed, is a well-established subdiscipline of anthropology in the German-speaking world (Gingrich, 2005). Current academic scholarship tends increasingly to be concentrated on the sociological and modern rather than the everyday life of peasants, though folk museums continue to curate early modern and contemporary material culture. New areas of research include ethnicity, identity, and urbanization (Göttsch and Lehmann, 2001). However, research by academics on material culture still persists, as illustrated by Ruth-Elizabeth Mohrmann's (1990) work on housing culture, based on probate inventories, and Gabriele Mentges et al.'s (2000) edited monograph on gender and material culture. Nineteenth-century German archaeology was split between the study of Central European prehistory and ancient/classical studies. Prehistorians, as elsewhere in Europe, concentrated on trying to define cultures geographical and chronologically, by mapping specific culture traits. This culture-history approach was exemplified by the work of Gustav Kossina (d. 1931), who believed in a crude correlation between cultural and ethnic groups (Fetten, 2002; Veit, 2002). This now-derided approach was further developed by Nazi archaeologists obsessed with Aryan superiority and purity (Hassmann, 2002; Kater, 1974). The legacy of Nazi theorizing led to a rejection of the theory in the post-war decades by German archaeologists. The discipline, at least in the west, developed an overriding emphasis on empirical data collection, a tradition rooted in

the Rankean school of nineteenth-century "objective" history (Arnold and Hassmann, 1995; Wolfram, 2002).

Other German disciplines like history and ethnology/folk studies had similar problems to archaeology in the immediate post-war era. Many academics who had espoused Nazism returned to their posts, and debate on Nazi historiography was muted. However, the very focus of their subject meant that ethnologists and historians had to eventually come to terms with both studying and explaining the Nazi period. This helped provide a catalyst for revisionist self-assessment during the general intellectual and political ferment that spread through western European universities in the 1960s (Dow and Lixfield, 1986; Eley, 1989). A new theoretical approach with particular relevance to historical archaeology arose in German historical studies in the 1970s and 1980s. This was *alltagsgeschichte,* or the history of everyday life, a concept that evolved from the work of Hans Medik, Alfred Lüdtke, and others at the Max Planck Institute for History in Gottingen (Lüdtke, 1995). It had its origins in a reaction to 1960s' modernization theory (influenced by the American sociologist, Talcott Parsons), which emphasized the role of the state and large-scale social structures in explaining social change. *Alltagsgeschichte* drew on many theoretical strands, including British and Althusserian Marxism, French structuralism, and the work of anthropological theorists such as Pierre Bourdieu (1990) and Clifford Geertz (1973). It emphasizes the experience of ordinary people and looks for meaning in the mundane actions and negotiations of everyday life. Lüdtke (1993), for example, coined the term "Eigen-sinn" for industrial workers creating their own personal space, a process existing outside of class resistance.

The concept of proto-industrialization devised by the American economic historian, Franklin Mendels (1972) was also influential in German history, inspiring both proponents of everyday history and of "big structures" (Kriedte et al., 1981). This theory sought to explain the impact of rural industry on the household economy of traditional European "peasant" societies. Proto-industrialization was seen by its proponents as a key transitional stage toward full industrialization, a proposition that was seen by many as highly controversial. Subsequently, an increasing emphasis has been placed on the regional nature of European development and the diversity of pathways to modernization (Ogilvie and Cerman, 1997). The literary-influenced, new culture history has recently become more popular in German history, and *alltagsgeschichte* has probably had its greatest impact outside Germany. The interconnectedness of "national" trends is also illustrated by the fact that one of the most substantial and innovative works to incorporate an *alltagsgeschichte* approach is *Ordinary Prussians,* written by an American scholar, William Hagen (2002).

Despite a rich background in the cognate disciplines of social and material culture studies, German-speaking practitioners of post-medieval archaeology have often been reluctant to undertake any kind of wider interpretation, let alone to theorize. Much of the development of post-medieval archaeology in Germany springs from urban rescue archaeology and from studies of its ceramic and glass industries. There is also a strong tradition of archaeometry (scientific analysis of materials). Even with such an internationally important area as the proto-industrialized stoneware industries of the Rhine, there has been a tendency to concentrate on typology, dating, and production technology (see Gaimster, this volume). Limited work by ethnologists, though, points to the need for more sociohistorical analysis on the organization of these industries (Kuntz, 1996). Since the late 1980s, German archaeologists have paid considerable attention to reevaluating the impact of the Nazi regime on their discipline (Härke, 2002). This has not been accompanied by any major theoretical upheaval as occurred, for example, in ethnology in the more revolutionary and idealistic climate of the 1960s (Eley, 1989; Wolfram, 2002). Nevertheless, a climate has evolved in archaeology that is beginning to encourage a wider range of approaches and more discussion on the future direction of the subject.

Post-medieval archaeology is now being taught formally at Bamberg, although aspects are sometimes covered by courses labeled just as medieval archaeology (Ericsson, 1999). Some more interdisciplinary and discursive work by medieval and post-medieval archaeologists is now beginning to emerge, mainly drawing on social and cultural history and folk studies (*volkskunde*) as a background (Ericsson, 1995, 2002). A few academic ethnologists

have also shown an interest in a dialogue with medieval and post-medieval archaeologists, and cooperation between the two disciplines is likely to be a fruitful field for future theoretical development (Seidenspinner, 1986/1987). Recent examples of more interpretive work in post-medieval archaeology can be found in the newsletter, *Mitteilungen der Deutschen Gesellschaft für Archäologie des Mittelalters und der Neuzeit*. Special themes have recently included the links between archaeology and historical events (MDGAMN, 2005) and transport infrastructure (MDGAMN, 2003). A substantial recent study is Atzbach's (2005) monograph on the leather and fur finds found in wall linings of houses in Kempten. This was based on a doctoral thesis at Bamberg, completed as part of an interdisciplinary archaeological/historical team, and the author examines changes in technology and fashion against a social-historical (*altagsgeschicte)* backdrop. The work of the English archaeologist David Gaimster (1997, 2005) on both Rhenish ceramics and German and Baltic archaeology should also be noted, for example, his study of material culture and Hanseatic identity. In addition, a few German-speaking scholars, though mostly prehistorians, are now tackling the implications of Anglo-American theory for the Central European tradition of archaeology. They are also absorbing aspects of these traditions into their own work, albeit critically and selectively (Biehl et al., 2002; Veit, 1998).

France

A factor limiting the influence of current Anglo-American theory, notably postprocessualism, has been the influence of idealist philosophies of knowledge in several European countries, as opposed to a tradition of empiricism. In particular, one can point to the influence of the philosophers, Réne Descartes (d. 1650), creator of Cartesian idealism in France, and of Georg Hegel (d. 1831) and Benedetto Croce (d. 1952) in Italian scholarship. Idealist philosophies of knowledge emphasize the subjective nature, or unreliability, of the observer and interpreter of data. This has led to an emphasis on solving problems by collecting more data rather than by retheorizing (Coudart, 1999; Guidi, 2002; Scarre, 1999).

Geography has played an important role in French historical and archaeological studies. Particularly important was the work of Paul Vidal de la Blache (d. 1918), who was influenced by the development of regional geography in Germany (Dickinson, 1969:208–228). He emphasized interaction between humans and environment and the significance of small, physically defined regions, or *pays,* as the basis for studying human geography. This school had a deep impact on the *Annales* school of history, founded by Marc Bloch (d. 1944) and Lucien Febvre (d. 1956), which started as a fusion of history, geography, and Durkheimian sociology. The concept of the region also played a central part in the work of Fernand Braudel (d. 1985), while his concept of different conceptions of historical timescale, especially the history of the long term or *le longue durée*, has been hugely influential (Burke, 1990; Friedman, 1996). After a period of neglect, the region (as in the Anglophone world) saw a second revival as a geographical concept from the 1980s onward, linked with an influx of theoretical ideas from the social sciences (Gilbert, 1988). Modern French geography was initially less influenced by phenomenological approaches (emphasizing perception and memory of place and space) than Anglophone geography but is increasingly exploring ideas of social space or *l'espace social* (Claval, 2003; Di Méo and Buléon, 2005).

Strong regional identities have persisted in France, despite the centralist agendas of Napoleon and many subsequent French governments. The persistence of the division between *langue d'oc* and *langue d'oil* is reflected in the publication of a specific journal on the medieval archaeology of southern France*, L'archéologie du midi medieval*. The great regional monograph written by a French historian, often born and raised in his chosen territory, has a long and proud history. The *Annales* school has long lost any coherence it had, mutating into various schools of social and cultural history: microhistory, feminist history, and histories of mentalities, national memory, and the family to name just a few (Charle, 2003). In social history, the 1980s fashion for the history of individuals has been since enlarged by studies of the social dynamics of the group (community, profession, class, etc.). French regional history still flourishes, even if it is not as fashionable as it once was, for example, recent

conference volumes, respectively, on the rural landscape and the Renaissance architecture of Normandy (Beck et al., 2004; Hervieu et al., 2003).

Certainly a highpoint of French medieval and post-medieval archaeology is the local/regional monograph, for example, long-term studies of potting industries from the medieval to early modern eras (Faure-Boucharlat et al., 1996; Flambard Héricher, 2002); and the great exhibition catalog like those on the Renaissance archaeology in the Ile du France (Musée Val-d'Oise, 1998). National syntheses seem to take second place, though, and examples include those by Jean Rosen (1995) on French faience and Danièle Alexandre-Bidon's (1986, 2005) studies of medieval and later ceramic consumption. Urban studies, in its widest sense, has produced a vast literature on the topography and fabric of French towns and cities, while fortification studies also has a voluminous, albeit atheoretical, literature. Urban archaeology has been sporadic in France despite long-term programs at Lyons, Douai, Tours, and St. Denis. There has been a major growth in this field since 1980 and especially since the creation of a national archaeology service (Institute national de recherches archéologiques préventives [INRAP]), funded by a developer tax (Demoule, 2004; Gamay, 1999). Open-area excavation was initially introduced to France ca. 1970 by the Czech prehistoric archaeologist, Bohumil Soudsky, and is now widespread in both town and country. The British style of single-context recording developed in urban centers such as Winchester and London is also widely used (Audouze and Leroi-Gourhan, 1981:177–178; Demoule et al., 2005). Unfortunately, as elsewhere in Europe, the sporadic production of excavation reports hampers an appreciation of the results of urban archaeology.

Medieval and post-medieval archaeology (one often cannot separate them in France) also has strong institutional links with medieval history and art history. The history of taste (*goût*) in the sense both of a history of civilization or aesthetics and of a history of cuisine is another recurrent influence (Abel et al., 1993; Alexandre-Bidon, 2005). A related theme has been the diffusion of technology and styles, especially from the Islamic-influenced Mediterranean (Abel et al., 1993; Vieille Charité, 1995). Ethnological work in France and its colonies has also influenced archaeological research, especially in the field of ceramics, for instance, a recurring interest in technological innovation, the organization of workshops, and the genealogies of artisans. Examples of such archaeological studies include Jean-Louis Vaysettes's (1987) study of the potting village of Saint-Jean-de-Fos in the Languedoc and Anne-Marie Flambard Héricher's (2002) monograph on the Bessin (Normandy) potteries. The founding of the ceramic analysis laboratory at the University of Caen in the 1960s established a strong tradition of archaeometry in French medieval and later archaeology, especially in regard to ceramics and glass.

The Renaissance has played a central role in French historical thought, and it is generally perceived as being at the conceptual center of the transition between the medieval and post-medieval worlds rather than the Reformation. This is reflected in the existence of a national museum for the Renaissance in the chateau at Écouen just outside of Paris and the sizeable Centre d'Études Supérieures de la Renaissance founded in 1956 at the University of Tours. The enormous open-area excavations at the Louvre from 1983 to 1998, which were associated with major renovation of the buildings, have highlighted the importance of early modern French court culture (Bresc, 2001; Van Ossel, 1998). A restoration program also resulted in the recent monograph on the sixteenth-century, pentagonal chateau of Maulnes in Burgundy, which represents the collaboration between an architectural historian and an archaeologist (Chatenet and Henrion, 2004). Studies by architectural historians have also centered on the everyday life and use of space in palaces and chateaux (Chatenet, 2002). The archaeologist Nicholas Faucherre is best known for his work on the fortifications of Marshal Vauban, but he has also cowritten a study on the alchemical symbolism of the Renaissance facade of the chateau of Crazannes in the Charente region (Faucherre and Pellerin, 2003). However, the study of courtly architecture in France is dominated by empirical analysis of fabric, plans, and archives rather than post-modernist concepts of space, such as those used by Bourdieu (1990:271–283) to study Berber housing. There is also a strong tradition of theoretical-oriented work on early modern France by British and especially American historians (Musgrave, 1997; Zemon Davis, 2001).

Despite the long tradition of landscape analysis, this field in the post-medieval period has been largely left to academic historical geographers and historians. An exception is the work of the archaeologist Antoine Paillet (1999, 2005), who has applied a multidisciplinary approach to the agricultural landscapes of the Bourbonnais (Massif Central). Professional and academic boundaries, however, have little relevance to the interdisciplinary nature of studies on rural landscapes and material culture. One can point, for example, to the archaeological relevance of the publications of the historical geographer, Jean-René Trochet (1987, 1997, 2006) on vernacular architecture, farming implements, and regionalism. Rural excavations have focused on deserted medieval villages, but Françoise Piponnier (1986) has excavated a post-medieval settlement in the Monts du Forez in the Central Massif. The journal *Ramage* (14 issues from 1982 to 2002) was published by the former Centre d'Archéologie Moderne et Contemporaine at the Sorbonne. It was edited by Philippe Bruneau and Pierre-Yves Balut and included many short papers on post-medieval and contemporary archaeology/material culture. Examples include a long series of articles on the material culture of French Catholicism in the nineteenth and twentieth centuries (Bruneau, 1986, 1990).

Industrial archaeology, military archaeology, and vernacular architecture are also well established in France as distinct disciplines. A number of theoretically oriented works concentrating on the symbolic meanings of historical-period gardens have been published by French and foreign scholars (Mariage, 1998; Mukerji, 1997). The Flemish academic, Frans Verhaeghe (1999), has also contributed theoretical overviews on the archaeology of the medieval and later periods to many French publications. Marie-Teresa Penna (1999) has published an excellent book that outlines the theory and practice of American historical archaeology for a francophone audience. Nevertheless, for political and philosophical reasons, French archaeology is not easily open to the adoption of theoretical ideas from the Anglo-American world, though it has been more likely to adopt innovations in field and laboratory methods (Audouze and Leroi-Gourhan, 1981; Demoule et al., 2005).

The Mediterranean

University-based archaeologists from northern Europe and America have played an important role in Mediterranean archaeology. This has been partly through the establishment of institutions like the British Schools in Rome and Athens, which are government-funded institutions designed to provide research facilities for visiting scholars. In addition to excavation, they have specialized in undertaking large-scale pedestrian surveys. Increasingly, geophysics and environmental analysis have been added as essentials of such surveys. There is also a growing tendency, though far from universal, to include the study of medieval and later landscapes within these multiperiod projects, sometimes explicitly incorporating a Braudelian *longue durée* perspective extending from the prehistoric to the present. Examples include the Biferno Valley project in Italy (Barker, 1995) and the Boeotia Project in Greece (Bintliff, 1997), all of which included the prehistoric to post-medieval periods within their remit. Mark Pluciennik et al. (2004) have also used archaeological data collected during a multiperiod survey in central Sicily alongside documentary research to examine power relations in the nineteenth- and twentieth-century agrarian landscape.

Foreign projects increasingly work with local archaeologists, even offering an alternative career route for research students, notably in American universities. The Internet-based group Squinch (http://www.und.edu/dept/squinch/Homepage.html), dedicated to medieval and post-medieval archaeology in Greece, is American-based, and many of its listed members are expatriate Greeks in American universities.

Recent studies on Greece include Joanita Vroom's (2003) work on the medieval and post-medieval ceramics from the Boeotia Project and Athanasios Vionis's (2005) study of the post-medieval material culture of the Cyclades Islands, both based on doctoral research at the University of Leiden. A project with a particularly strong focus on the recent past was the study by a team of British and Spanish researchers, based at the University of Leicester, of upland pastoralist farming in the Sierra de l'Altmirant region of Spain. This combined archaeological, historical, and ethnological research methods

(Christie et al., 2004). The Dutch archaeologist Antoon Mientjes et al. (2002) has compared upland pastoral economies in post-medieval Sicily and Sardinia. His work stresses the importance of local social and political structures in understanding the historical development of agrarian societies and the impact of modernization.

Post-medieval archaeology is still barely acknowledged as an academic discipline in Mediterranean Europe, though a few archaeology departments now teach it, notably Pisa and Venice in Italy and Seville in Spain. Mediterranean academics also tend to be heavily involved in excavation rather than the extensive landscape surveys undertaken by the foreign schools. The growth of urban rescue archaeology has been a major force in promoting post-medieval archaeology. In addition, heritage- and tourist-related archaeology of monuments is another field of potential growth, though excavation is often left out of conservation strategies (Amores, 1997; Milanese, 1997; Represa, 1996). Ceramic (and to a lesser extent glass) research has long played a central role in Mediterranean archaeology of this period, initially reflecting their importance in art history, especially the Renaissance and the transmission of Islamic ideas to Europe. Research on production and trade has been long established, but more recent studies have begun to extend to the consumption and social meaning of artifacts. The changing emphases can be seen in the proceedings of the quartennial Congrès International sur la Céramique Médiévale en Méditerranée, founded in 1978.

Italy

Italy is the only European country outside Britain to have an annual journal solely dedicated to the general archaeology of the post-medieval period, *Archeologia Postmedievale,* founded in 1997 by Marco Milanese. In Italian academia, Croce's idealist emphasis on aesthetics and antiempirical stance impacted the post–World War II study of both history and archaeology. It equally affected Marxist and Catholic academics, the two main opposing strands of intellectual thought in the immediate post-war years. Idealism inhibited the consideration of broader theoretical approaches and also slowed the adoption of scientific methods. As economic and technological modernization remolded Italian society from the 1950s, idealism tended to be replaced in academic life by a positivist philosophy that favored scientific and quantitative approaches. In recent decades, postprocessualism (an idealist philosophy) has tended to suffer from the backlash against both the politicization of Italian academia and against Crocean idealism (Guidi, 2002). Italian history has long abandoned the bipartite struggle between Catholic and Marxist wings and is now highly eclectic if still politicized. An important Italian contribution to the new history of the 1970s was the study of microhistory, which emphasized the small-scale study of individuals, events, or places but often relating them to large-scale social and cultural trends (Ginzburg, 1980; Levi, 1991; Muir and Ruggiero, 1991). The creation of new alignments in Italian history saw a fight between social and cultural historians centered around the microhistory journal *Quaderni Storici* in the 1980s (Pomata, 2000).

The excavations in Genoa, by Italian and British archaeologists from the 1960s onward, were especially influential in promoting the study of the post-medieval period (Andrews and Pringle, 1977; Gardini and Milanese, 1979). Publication of post-medieval urban archaeology is also beginning to be more common at least in some regions (Fozzati, 2005; Melli, 1999; Milanese, 1997). Urban archaeology also played a major role in encouraging the study of everyday ceramics (Blake, 1993). Not surprisingly, the study of the Renaissance and urban culture in general has been a major focus of study for both Italian and foreign historians who have generated a huge literature. Architecture, fortifications, gardens, ceramics, and glass have all been studied as part of Renaissance history.

Among recent trends in cultural and art history of significance to archaeology is the new attention being paid to the social and political contexts of art, studies of the household and consumption, and international networks of cultural exchange (Burke, 1998; Goldthwaite, 1989, 1995; Jardine, 1998; Ruggerio, 2002; Sarti, 2002). The 2006 exhibition at the Victoria and Albert Museum in London on the interior of the Italian Renaissance house typifies the consumerist approach to art history,

albeit limited to the upper and middle classes (Ajmar-Wollheim and Dennis, 2006). There has been a strong interest by Italian archaeologists in technology and trade, not only of ceramics but also of metals, glass, and marble (Blake, 1980; Mannoni and Mannoni, 1985; Mannoni and Giannichedda, 1996; Milanese, 1993). The ability of medieval and post-medieval ceramics to shed information on the relative social status of rural sites was revealed by the work of Luciana and Tiziano Mannoni (1975) in Liguria. An example of the emerging use of material culture perspectives is Sauro Gelichi and Mauro Librenti's (1998:107–138) analysis of the sixteenth- and seventeenth-century artifacts from the excavations of the urban nunnery of S. Chiara in Finale Emilio, near Bologna. Italian archaeology is, however, highly regional in its organization, and research on the post-medieval period thus tends to be highly uneven in its distribution (Blake, 1993:4).

There is a strong tradition of agrarian studies in Italy. Emilio Sereni's (1997) classic work, *History of the Italian Agrarian Landscape,* was published in Italian in 1961. This outlined many of the enduring themes of the Italian countryside. Its Marxist philosophy has tended to be replaced in more recent work by a less deterministic view of human–environment relationships, which sees humans and the physical environment as part of a single ecosystem. Revisionist work is also seeing the agrarian economy (notably in southern Italy) as less static and unchangeable than previously thought. Yet, Sereni's concerns for long-term human adaptation to change, landscape design and the interaction of physical geography with social and tenurial systems remain important. The late survival of peasant society and the rapid modernization of the countryside since World War II have also encouraged links with an active rural conservation movement (Lucia, 2005; Malvoti and Pinto, 2003; Mazzino and Ghersi, 2003; Pinto et al., 2002), as well as ethnographic and ethnoarchaeological research (Milanese, 2000). Italian archaeologists are beginning to study post-medieval rural landscapes, for example, through work on deserted settlements (Quirós Castillo, 1997) and urban hinterlands (Milanese, 2004).

A conference entitled "Constructing Post Medieval Archaeology in Italy: A New Agenda" was held in November 2006 at the University of Venice, organized by Sauro Gelichi and Mauro Librenti. It brought together Anglo-American and Italian scholars to discuss theoretical approaches to historical archaeology. As elsewhere in the Mediterranean, there is unlikely to be a huge explosion in academic historical archaeology because institutions change slowly, and resources are limited. Nevertheless, the increasing cooperative nature of academic research between indigenous and external scholars is creating a climate that should produce theoretical debate and hybridization and result in an increasing number of innovative theses and research projects in Italy and the wider Mediterranean.

Scandinavia

Scandinavian archaeology has a long pedigree of indigenous development, but the multilingual nature of its population has made it aware, if not always receptive, of outside traditions. Certainly, a number of British archaeologists and historians have found employment in its universities or state archaeology services where they exist. It is therefore unsurprising that Scandinavia has proved the area of Europe most receptive to Anglo-American theory, though there are considerable variations between countries. Norway and Denmark have favored processual approaches, whereas Sweden has been particularly receptive to postprocessualism (Olsen, 1991, 2002).

Scandinavia has played a key role in the development of modern European ethnology, beginning with the foundation of the first open-air museum at Skansen in Sweden in 1891 (Stoklund, 1983). Academic ethnology in Scandinavia has also been at the forefront of theoretical developments in material culture studies from the use of distribution maps and diffusion models early in the twentieth century to applying post-modern, phenomenological, and feminist ideas in recent decades. Scandinavian ethnologists remain remarkably eclectic and interdisciplinary in their methodological and theoretical approaches. There has been a move since the 1970s for academic ethnology to concentrate increasingly on modern societies and for material culture studies to be less fashionable. Nevertheless, the work of Scandinavian ethnologists continues to be highly significant in material culture research, both

regionally and internationally (Löfgren, 1997; Olsen, 2003; Rogan, 1996).

Post-medieval archaeology has mostly grown out of urban excavation programs, for example, long-established projects in Trondheim in Norway and Lund in Sweden (Carelli, 1997; also see Gaimster, this volume). The subject is at its most developed and theoretical in Sweden where medieval archaeology absorbed many new methodological and theoretical ideas from the 1980s, for instance, the use of the Harris matrix and the analysis of social space. A range of this new work was made available in two English language collections published by the Central Board of National Antiquities (Riksantikvariëambetet) and the University of Lund to showcase this work at successive Medieval Europe conferences in York and Bruges (Ersgård et al., 1992; Andersson et al., 1997). It is often difficult to separate medieval from post-medieval studies as much fieldwork is multiperiod in nature. However, post-medieval rural farmsteads, field systems, and industrial sites have been excavated and surveyed by the Riksantikvariëambetet (Karlenby, 2003; Lindman, 2004). Christina Rosén's (2004) recent book, based upon her doctoral dissertation at the University of Lund, compares the urban and rural material culture (especially housing and ceramics) of Halland from the Middle Ages to the nineteenth century. Such a study would be impossible in most other northern European countries because few rural sites dating to these periods have been excavated. Rosén notes a clear distinction between urban and rural material culture especially in the period from around 1750 to the early nineteenth century. In particular, she argues that peasants create their own distinctive material culture as an act of resistance to the European-wide attempts by the elite to reform popular cultures in the period after 1650, as described by the historian Peter Burke (1994). In the nineteenth century, Rosén (2004) argues that the increasing penetration of inexpensive, mass-produced consumer items begins to erode rural distinctiveness.

Low Countries

The Low Countries are notable for their rich documentary sources and the many sophisticated studies by economic and social historians on town, countryside, and increasingly the links between them. The dense urbanization of these countries makes them particularly significant for the understanding of the origins of consumer culture. Much pioneering work on material culture using probate inventories has been carried out in the Netherlands, including recent monographs by Schuurman et al. (1997), Kamermans (1999), and Dibbits (2001). Specific studies on ceramics in inventories include those by Hester Dibbits and Aart Noordzij (2000) on Doesburg and Lichtenvoorde and by the Belgian historian, Bruno Blondé (2002) on tableware in Antwerp. Other related work of high relevance to archaeology includes research on the material culture, organization and social space of the household (Schuurman and Spierenburg, 1996), and on the social space of townscapes (Boone, 2002).

There is a tradition of studying landscape and environmental history, though archaeology has made little contribution yet to the post-medieval period, apart from the polder wrecks (see Gaimster, this volume). (Polders are former bodies of water that were drained and are now low-lying tracts of land enclosed by embankments, or dikes, where buried wrecks are often found.) The role of water as a threat and a resource is a central issue, for instance, in the work of historians, Petra van Dam (2002) on Dutch hydraulic engineering and Chlöe Deligne (2003) on the role of the River Senne in the development of Brussels. Recent Low Countries colloquia, for instance, the "contact days" (annual gatherings) for Belgian landscape studies, established in 2005, suggest that theorized and interdisciplinary landscape research is an emerging growth area.

Linguistic proficiency means that Dutch archaeologists are very aware of the debates in neighboring countries. Anglo-American theory has had some impact on prehistory in the Netherlands but little on medieval and later archaeology, which remains poorly represented in academia. In the Low Countries, post-medieval archaeology has largely grown out of urban rescue excavation. In the Netherlands, about 50 towns have some professional archaeological presence, although regular excavation takes place in a much smaller number. Recording of standing buildings is also well established in many towns. The rich bourgeois culture and the use of brick-lined cesspits from the fourteenth century onward have produced a

profusion of rich artifact groups often with near complete ceramic and glass vessels. The publication of such groups dominates the literature.

Despite prolific publications from some towns, such as Zwolle and 's-Hertogenbosh, the growing backlog of urban excavations is a major problem (Sarfatij, 1990, 1999). A certain amount of synthetic and comparative work, especially on material culture, has been carried out by archaeologists employed in the urban municipalities or by the state heritage service, the Rijksdienst voor het Oudheidkundig Bodemonderzoek (ROB) (Baart, 1990; Bartels, 1999, 2005; Clevis, 1995). In addition, there have been rare doctoral theses, for example, Cora Laan's (2003) published work on the material culture of drinking in the eighteenth-century Netherlands, which uses cesspit finds, inventories, and paintings as sources. She notes the significance of drinking depended on its social context, which reflected divisions of class and gender and the distinction between private and public spaces. Even inns had public spaces where alcohol was drunk separated from more private areas where coffee and tea were consumed.

Unfortunately, the lack of a university framework for post-medieval archaeology and the increasing commercial pressures in the applied sector do not bode well for the expansion of either synthetic or theoretical work in the immediate future. Yet, the Netherlands will probably continue to produce a steady stream of publications on urban excavations, finds, and standing buildings of the post-medieval period.

In Belgium, archaeology is split between Flemish and Walloon state archaeology services and the two regions have distinct archaeological cultures. Numerous towns, most notably Namur, Courtrai, Ghent, Antwerp, Bruges, and Brussels, have their own archaeology units. After international criticism that the archeology of military sites from World War I was left to licensed but untrained amateurs, the Flemish Institute for Heritage (VIOE) has recently set up a specialist unit to tackle this new field of study. There is a strong record of publishing inventories of architectural remains and industrial sites in both language zones. Some post-medieval archaeology is taught as a part of the combined art history and archaeology degrees at the Flemish Free University in Brussels (VUB) and the francophone University of Liege. Frans Verhaeghe, who taught at the VUB until his retirement in 2005, was a mentor to many younger post-medievalists across Europe. His publications combine an international and interdisciplinary approach to historical archaeology with an eclectic appreciation of theory (Verhaeghe, 1991, 1997, 1999).

Central and Eastern Europe

Prior to World War II, archaeology was most advanced in the richer countries of this part of Europe such as Czechoslovakia, Hungary, and Poland. The German school of prehistory, with its emphasis on the chronological and geographic delineation of distinct cultures, was influential in Central Europe prior to 1940. Communism brought both Marxist and Pan-Slavic ideologies to Central and Eastern Europe, though an interest in national origins survived as an undercurrent (Barford and Tabaczyński, 1996; Coblenz, 2002). Some awareness of western archaeology was also maintained through journal exchanges, at least at the larger institutions. Polish medieval archaeologists also worked abroad, for example, in the 1960s on a series of Wheeler-influenced excavations of deserted medieval villages in France (École Pratique, 1970). Such contacts, however, only had a superficial impact on the general practice of Polish archaeology at home (Lozny, 2002). Since the fall of Communism, archaeology in Central and Eastern Europe has been transformed intellectually by the democratic revolutions and ongoing debates. However, still torn between the strong influence of traditional approaches and the eclectic impact of new ideas, its future theoretical directions are far from clear and may be diverse (Biehl et al., 2002).

As elsewhere in Europe, the growth of urban archaeology, especially in East Germany and Poland, was important in the post-war recognition of post-medieval archaeology, though lack of publication was a major problem (Urbanczyk, 1996). Nawrolski's (1983) paper on the Renaissance planned town of Zamość in Poland was one of the few syntheses. The Czechs produced an edited volume specifically on post-medieval archaeology, which was submitted for publication on the eve of

the "Velvet Revolution." This showed both a tradition of pragmatic research and knowledge of comparable work in the West (Smetánka and Žegklitz, 1990). The study by Matoušek et al. (1990) of the siege of an eighteenth-century fortification, for example, was influenced by Leland Ferguson's (1977) pioneering work on the distribution of excavated artifacts at Fort Watson, South Carolina, in the United States. This volume, intended to be the first in a series, has not been followed up; but various publications relating to ceramics and glass, and the Prague Castle excavations, have appeared (see Gaimster, this volume). Hungarian archaeologists are increasingly studying Turkish-period remains, though largely from excavations focused on medieval sites such as the Palace of Buda (Holl, 2005; Laszlovszky, 2003). East German archaeology was quickly integrated into the federal system and Marxist theory administratively expunged (Gringmuth-Dallmer, 1994; Jacobs, 2002).

In many Eastern European countries, there is a strong ethnographic tradition of relevance to post-medieval archaeology. Originally the two disciplines were united by a common Marxist concept of "material culture," reflected in such bodies as the Institute of Archaeology and Ethnology (originally the Institute of the History of Material Culture) in Warsaw (Schild, 1993). A recent project on burial grounds from the thirteenth to eighteenth century in southern Estonia represents a continuing tradition of hybrid archaeological/ethnological research (Valk, 2001). Archaeologists and especially ethnologists in the former Communist Bloc have reestablished links with their German and Scandinavian colleagues. Nevertheless, there is a danger that the lure of international grants will create a vacuum in material culture studies, especially of the early modern period, as ethnologists increasingly work on modern sociological topics. The main growth area for post-medieval archaeology in Central and Eastern Europe, as in the past, is likely to come from urban excavation as economic development progresses (Barford and Dzieduszycki, 1999). There is also potential in the heritage sector as tourism expands. Resources for research and publication are likely to remain problematic in these sectors. A rising interest in local history, which has followed the fall of Communism, may bode well, though, for the public support of archaeology and conservation.

Overview

The above brief overview has defined some of the key structures and intellectual trends that have molded the use of theory in continental post-medieval archaeology. As has been seen, post-medieval archaeology is still largely entwined with medieval archaeology. The main driving force for post-medieval archaeology has tended to be from urban archaeology and a desire to make sense of the large groups of ceramics and other artifacts recovered, often from rubbish pits and cesspits. Rural archaeology has been relatively undeveloped apart from manufacturing, with ceramic and glass production at the forefront. The intellectual roots of post-medieval archaeology across Europe also clearly lie in history, though anthropological influences have grown in recent decades.

Explicit theoretical discussion on the Continent has been limited, though archaeologists clearly work in specific academic traditions. There is also a rich and largely untapped reservoir of theory in closely related disciplines such as history, geography, and ethnography. Already a degree of diffusion of ideas exists and these influences will probably increase and become more explicit as post-medieval archaeology evolves. However, post-medieval archaeology badly needs to be included in the new transnational research projects funded by the European Economic Community (EEC). A single archaeologist, David Gaimster, did contribute to the recent Cultural Exchange in Europe, 1400–1700: The Formation of a European Identity research program funded by the European Science Foundation; but this is the exception rather than the rule.

It is also clear that the current nature of post-medieval archaeology has been largely shaped by the methodologically obvious, whether Renaissance chateaux and fortifications, kiln sites, or bourgeois artifact assemblages from urban cesspits. New methods and concepts need to be applied to extract information, for example, about rural populations and the urban poor. Even the Low Countries had its urban underclass and outsiders. This will be by no means easy because of the biased nature of deposit formation, problems of residuality on long-occupied sites, and a lack of research-driven excavation (Courtney, 2006; Newman, 2006). The concerted archaeological search for known ethnic populations

in London, for example, has proved extraordinarily difficult (Jeffries, 2001). However, it is essential that we continue to proactively develop our discipline despite the constraints increasingly posed by a commercial environment.

Europe and the Wider World

Can America and Europe be United by a Global Archaeology?

A number of historical factors, as well as contrasts in the physical character of the archaeological record, contribute to the differences between American and European (including British) archaeologies of the period after 1500. Among the major intellectual differences is that European archaeology is closely linked to history and related humanities disciplines such as classics, history, geography, and art history (Courtney, 1999, 2007). By contrast, in America, historical archaeology has largely developed as a subbranch of cultural anthropology, hence the much-quoted dictum: "Archaeology is Anthropology or nothing" (Willey and Phillips, 1958:2). This should, of course, read "American anthropology," but it is doubtful that many Americans realize the irritation this minor ethnocentrism can provoke in foreign scholars. The adoption of anthropological theory by social and cultural historians on both sides of the Atlantic and the worldwide spread of the anti-empirical perspectives of postmodernism have also blunted the intellectual differences between disciplines and continents. As a result, theory is increasingly being used in both a selective and an eclectic manner on both sides of the Atlantic (Hodder, 1991, 2001; Preucel and Hodder, 1996). In everyday practice, many American archaeologists have long worked skillfully with documents, and many Europeans have made use of anthropological theory. Nevertheless, the intellectual divide between cultural anthropology and history still continues to be important in understanding key differences between approaches in the United States and in Britain and Continental Europe (Hodder, 2003).

As has been said of scientists, most historical archaeologists that have ever existed are now alive and working in the United States. More interaction between European "post-medieval" and American "historical" archaeology is therefore inevitable. Can we, though, really be united by the subjectivity of postmodernism or the big questions of a global archaeology (Orser, 1996)? Is the spread of American archaeological theory a much-needed intellectual refresher for parochial and jaded "old" Europeans, the spread of yet another form of cultural fascism by the world's superpower, or part of the growth of a rich international kaleidoscope of ideas that opens up personal choice? The American archaeologist Charles Orser (1996:22) has put forward the concept of a global archaeology united by the four "haunts" of colonialism, Eurocentrism, capitalism, and modernity. He has also coined the aphorism "Dig locally, think globally" for his approach. Orser's model is essentially a worldview centered in American cultural anthropology. For many archaeologists trained in the European tradition, a central problem is the leap from local to global without regional or national analysis as an intermediary. In Europe, the main conclusion of the recent work on feudalism, the development of the nation state, industrialization, and modernization, is that each of these phenomena followed multiple and diverse paths that need to be first analyzed at the regional level (Courtney, 1996; Hudson, 1989, 1999; Reynolds, 1994; Tilly, 1993).

In a paper delivered at the Medieval Europe conference in Bruges, Orser (1997) noted some marked differences of approach in European archaeology, for instance, a concern with the transition from medieval to post-medieval. However, he suggested that this too can be incorporated within the bigger picture of his four "haunts." In particular, he cites Robert Bartlett's (1994) work on medieval Europe, stressing the role of medieval colonialism in spreading a European blueprint of social organization. However, the concept of a common European blueprint can be taken too far. A Cistercian monk may have traveled from Ireland to Poland speaking Latin, connecting during his journey with others of a common monastic order. For the rural peasantry, the overwhelming bulk of the population, a few score miles could mean very different agrarian system, inheritance patterns, and dialect.

If we take the case of Wales (the current author's area of specialization), the Norman invasions of the eleventh and twelfth centuries did indeed introduce towns, a monetary economy, and Romanized the existing church system, though the economic elements may have developed in any case. Politically it created a country split between numerous and largely, autonomous feudal, lords. This produced a flat urban hierarchy of small towns that profoundly affected the cultural and economic development of Wales. Despite new opportunities, uneven economic development and growing problems of ethnic and religious inequality persisted in the modern period. Integration into a wider British economy and culture was only ever partial, and the twentieth century saw a revival of Welsh identity fed by the success of its rugby team. Colonialism indeed changed and helped mold the modernization of Wales, but its history and character remained resolutely different from that of England (Courtney, 1994, 2005; Hechter, 1975; Williams, 1985). The creation of distinctive local identities was thus as major an outcome of medieval colonialism as the spread of a Catholic-mercantile worldview. It should be stressed that this argument is not a call for parochialism but a different perception of how we conceive the linkages between local and international perspectives. Regardless, a mature discipline ought to be able to encompass studies of all scales from the individual and household to international comparison.

Colonialism and Beyond

The comparative study of colonialism as a concept across time has recently become popular (Given, 2004; Gosden, 2004; Orser, 1999). Such studies are useful in that they can inspire new questions and approaches. However, ultimately there are no laws of history. As Gosden (2004) has argued, the colonialism of the last 250 years was marked by a particular set of power relations associated with the European nation state. One might also argue that the feudal or lordly power structures of medieval colonialism made it equally distinctive. As a historically trained archaeologist, the current author would argue that the most penetrating insights are likely to come from studying the dynamics of specific colonial societies in their nexus of political, economic, and cultural power relations, or by synchronic comparison that emphasizes difference as much as similarity. Certainly, the archaeology of the so-called "Celtic" fringe of Britain is ripe for comparative work, even if its ultimate potential is unclear.

Many American archaeologists have privately expressed to the current author their surprise at the lack of interest in colonialism by European, and especially British, archaeologists. Part of the answer lies in the fact that post-medieval archaeology was until recently largely practiced outside the academy by field and museum archaeologists. Low pay, lack of access to funding, and pressures not to do "research" have hampered wider perspectives of all kinds. In addition, there has often been a collective amnesia and embarrassment about colonialism in Europe. In Britain, for example, anyone over 60 was probably brought up on the history and glories of the British Empire. Anyone younger has probably gone through their education without the barest mention of empire and colonialism. There has been a growth of interest recently stemming from the growth of a multicultural society in Britain, and other former colonial powers, from the 1960s onward. This has been heightened by the emergence of postcolonial studies, inspired by such works as Edward Said's (1978) *Orientalism*.

A recent tendency to apply postcolonial theory in any context of dominance, for instance, Prussia, has been criticized as being reductionist (Reisenleiter, 2002). It can also provoke a reaction in the colonized that their achievements are always seen as responses to the colonizer. Nevertheless, despite limitations, the concepts of colonial and postcolonial theory still have usefulness in discussing the colonized parts of Europe, for example, Ireland and Wales. However, competing theories of neocolonialism, uneven development, center vs. periphery, and marginality also offer overlapping explanations. Yet, the histories of all regions and countries are surely too complex, dynamic, and multifaceted to be fully explained by a single theoretical perspective.

The often subtle impact of colonial expansion on European economic and cultural development should undoubtedly be high on the research agenda

of European post-medieval archaeologists (Berg and Clifford, 1999; Mukerji, 1983). However, one must beware of glibly ascribing every European development to outside influence without solid research. Colonialism did play a role, for example, in the shaping of the European nation state, but numerous indigenous factors were also at work in its evolution (Tilly, 1993). The role of court cultures, the wars of religion and the Huguenot diaspora, the Hanseatic trade network, and diffusion of Islamic influences from the Mediterranean, for example, all had roles in cultural transfer. The acceptance of historical archaeology by the academy has enabled younger British scholars in particular to explore colonialism abroad, for example, research by Gavin Lucas (2004) on the Dwars valley in South Africa or Dan Hicks (2000) on the Caribbean. One can also note the work of Harold Mytum (2002, 2004) and Alasdair Brooks (1997) on postcolonial identity in Wales and Ireland. European state funding has also allowed a few Continental archaeologists to work in surviving colonies, for example, the French research program in Guyane (Puaux and Philippe, 1997). This trend is to be welcomed, but for most European archaeologists, especially beyond the major ports, colonialism is not likely to be a central question of the research agenda.

In a city like Leicester (the writer's hometown), the prospect of an Asian-British majority population within the near future means that dialogue is essential. One can, of course, point out the international connections of tea drinking and Chinoiserie (to an audience only too aware of this already), but this can only be developed so far by archaeologists working in a commercial environment in a landlocked city. Perhaps the best prospect of making archaeology and heritage relevant is not through stressing the genetic base of cultural heritage but through emphasizing the "power of place" (Hayden, 1997). We all share a common environment, which modern immigrant communities are shaping, as did our medieval and early modern predecessors. Historical archaeology through its interest in the recent and contemporary has a special place in such an educational role. In addition, we need to be constantly aware of the dangers of archaeology and heritage (the "blood and soil" syndrome) being used to fan nationalist and xenophobic extremism in an emerging multicultural Europe.

Conclusion

It is fairly clear that there will not be a theoretically united European archaeology in the foreseeable future. Important and deep-seated differences of culture and philosophy remain, and these affect the way various Europeans excavate sites as well as their attitudes to theory. Anglo-American theory is also unlikely to suddenly become a dominant force, though its ideas will undoubtedly spread. Even the growing number of sympathetic theorists on the Continent have tended to argue for a critical borrowing of ideas, whilst also being cautious of an Anglo-American intellectual hegemony (Biehl et al., 2002; Eggert and Veit, 1998; Olsen, 1991). Many of the same basic theoretical ideas, however, are already available across Europe in the theory of cognate disciplines such as history and ethnology. A multiplicity of European-style archaeologies, but sharing some common methodological and theoretical characteristics, is thus the most likely outcome.

The growth of the Internet and inexpensive airfares, the expansion of the EEC, and various international research and student exchange schemes are breaking down national barriers to intellectual discourse. In 1992, the revised European Convention on the Protection of the Archaeological Heritage (commonly known as the Valletta Convention) attempted to raise standards of heritage protection across the Continent, though it was only ratified by the United Kingdom in 2000 (Council for British Archaeology, 2006). Archaeologists are increasingly being brought together by international conferences like the European Archaeological Association yearly meeting, Medieval Europe, and the Lübeck colloquia on Hanseatic urbanism. It is therefore inevitable that European archaeology will become increasing eclectic and less tied by national tradition. Nevertheless, the development of post-medieval archeology in Europe faces a number of problems. Specialist post-medieval posts in universities are still rare or nonexistent in most European countries, and opportunities for students to obtain advanced degrees in the field are usually limited. The bulk of post-medieval archaeology continues to be practiced in the rescue (salvage) excavation and heritage sectors. Commercial and bureaucratic pressures mean that research is becoming more and more difficult in these areas. Low

wages mean that for many archaeologists, especially those with families, even going to a national conference may be a major financial problem. There is also a danger of increasing competition for grants in academia, leading to a dull conformity of fashionable approaches.

A dialogue with international anthropology (including ethnology), and more particularly with American historical archaeology, is essential for the future development of European (including British) post-medieval archaeology. One cannot but acknowledge the sheer diversity of approaches and perspectives within American historical archaeology and as reflected in the other chapters in this volume. There is much that Europeans can learn both methodologically and theoretically. However, we need to adopt new ideas critically, not merely because they are novel. Ideas are not neutral but reflect specific political and philosophical traditions of which we need to be conscious. As Europeans, we have distinctive physical landscapes, histories, and cultures, and these are bound to influence our approach and priorities, however, international we may be in outlook. Much of Western Europe, at least, shares strengths in stratigraphic excavation, a strong tradition of local/regional/landscape history, and in developed ideas of material culture. We need to build upon these, especially our deep roots in a historical tradition, but we also need a discipline that is open to new ideas and marked by both variety and the intellectual freedom to tolerate dissent.

European post-medieval archaeologists should seek to tackle the minute nuances of *terroir* and region and the everyday actions and choices of farmers, merchants, and industrial workers. We need to research the structure and economy of the household as a focus of both production and consumption. The further study of rural landscapes and farming is a high priority, and we should also seek to better integrate landscape and material culture studies. Nor should we neglect the study of the large structures at the regional, national, and international levels if we are to develop a rounded subject. Archaeology will undoubtedly increasingly contribute to the study of the rise of the nation state, colonialism, regional, and international trade structures, and the tensions between an increasing homogenization of European material culture and the continued creation of localized identities. One area where European archaeologists still lag miserably behind our American colleagues, despite some recent interest in England and France, is in taking the archaeology of the last 200 years seriously (Balut and Bruneau, 1986, 1997; Buchli and Lucas, 2001; Tarlow and West, 1999). Increased trans-Atlantic dialogue and cooperation should be warmly welcomed but is likely to be more successful if based on a mutual understanding and appreciation of our differences.

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Beyond Consumption: Toward an Archaeology of Consumerism

Teresita Majewski and Michael Brian Schiffer

Introduction

In 1982, Kent V. Flannery ridiculed archaeologists—garbologists in particular—who had taken up the analysis of modern American artifacts. Despite Flannery's denunciation, Rathje's "Projet du Garbage" and other modern material culture studies have survived and prospered. As a genre of archaeology, however, modern material culture studies have low visibility because, we suggest, they lack a thematic focus. In this chapter, we attempt to remedy this situation by redefining modern material culture studies as the archaeology of consumerism, following scholars such as Martin (1993), Schiffer (1991), and Spencer-Wood (1987a).

Modern material culture studies are usually taken to be research on the artifacts of industrial societies that can furnish information about those societies (e.g., Gould and Schiffer, 1981; Rathje, 1979; Rathje and Schiffer, 1982). But, in light of current research in ethnoarchaeology and historical archaeology, this definition seems too limiting. For example, in the ethnoarchaeology of traditional communities, many investigators, including Lewis Binford (1976), Susan Kent (1984), James Skibo (1994), and Brian Hayden (1987; Hayden and Cannon, 1984), have recorded and analyzed imported artifacts of industrial manufacture. These projects suggest that ethnoarchaeology in traditional societies, and modern material culture studies in industrial societies, merge seamlessly. Evidently, the "us" in the "archaeology of us" is becoming more inclusive, taking in all peoples who participate, even marginally, in the modern world system.

The boundary between historical archaeology and modern material culture studies is also blurring as the temporal reach of historical archaeology, particularly in "rescue" and "cultural resource management" contexts, comes ever closer to the present (e.g., Adams, 1973; Carlson, 1990; Claassen, 1994; Delgado, 1992; Orser and Babson, 1990; Wood, 1991). If, as Leland Ferguson observed in 1977 in his introduction to *Historical Archaeology and the Importance of Material Things*, the "historic" period goes from "the seventeenth century through the present day," then modern material culture studies and historical archaeology may be indistinguishable.

As historical archaeology, ethnoarchaeology, and modern material culture studies continue to coalesce (e.g., Gould, 1990), the latter term is liable to disappear as the label for a distinct genre of archaeology. For pragmatic and intellectual reasons, however, we do not believe that this should happen. In the pragmatic realm, "material culture studies" is a term now widely employed in other disciplines. Thus, by retaining "material culture" and the modifier "modern," archaeologists signal some commonality of subject matter with sociologists, historians, folklorists, cultural anthropologists, etc. Examples of these multidisciplinary studies include Berger (1992), Ingersoll

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and Bronitsky (1987), Kingery (1996a, ed. 1996b), Lubar and Kingery (1993), Miller (1995), and Poicus (1991).

The intellectual reason for retaining the term "modern material culture" relates to the growing realization that archaeologists studying "modern" societies are concerned with phenomena of modernity—specifically consumerism. Although investigators might define modernity in different ways, most would recognize that one of its major features is consumerism. We suggest that modern material culture studies, which interdigitate with ethnoarchaeology and historical archaeology, can be defined thematically as the archaeology of consumerism or, simply, consumerist archaeology.

Consumerism is the complex of technologies, organizations, and ideologies that facilitate the mass production, mass distribution, and mass consumption of goods. A consumer society is one organized around the provisioning of its members—particularly those of the middle and working classes—with a seemingly limitless array of ever-changing products serving diverse utilitarian and symbolic functions (Miller, 1987, 1994, 1995; Schiffer, 1991). Consumerism also extends to behavioral components of societies, such as households, corporations, religious and social institutions, and governmental agencies (Rathje and Schiffer, 1982).

We emphasize that the study of consumerism goes well beyond consumption itself, taking in all aspects of consumer societies—political, religious, educational, legal, leisure, economic, aesthetic, and so on—including the infrastructure for transport, energy, and communication. Consumerism research also studies services, whether provisioned by the state or by private enterprise (Miller, 1995), because the delivery and use of services involves artifacts. Although consumerism seems to thrive best under conditions of corporate capitalism and "free" markets, attempts to create consumer societies on socialist and communist foundations are also of interest.

The Roots of Consumerism

The aim of consumerist archaeology is to explain, through comparative studies, differences and similarities in consumer societies and in their developmental trajectories. Conceived in this way, consumerist archaeology has no fixed temporal boundaries—one could, after all, investigate the stirrings of consumerism in the Italian Renaissance, as has David Kingery (1993; also Goldthwaite, 1993; McCray, 1996), but most studies will concern the eighteenth century to the present. Moreover, consumerist archaeology also lacks arbitrary spatial boundaries. Many studies would treat Western and Westernized industrial societies, but also encompassed are Second- and Third-World peoples who (1) make products in the factories of multinational corporations, (2) consume such products made elsewhere, (3) make craft items for mass markets in industrial societies, and (4) participate in "development" projects. Because studies of consumer behavior, per se, are nothing new in archaeology (e.g., see papers in Spencer-Wood [ed. 1987b]), much previous work—theoretical, methodological, and empirical—can be folded into a broadly conceived consumerist archaeology.

A consumerist archaeology implies no a priori commitments to a particular paradigm, conceptual scheme, or theoretical program. Not only are theoretically diverse archaeologists—behavioralists, systems theorists, structuralists, Marxists, and so on—developing the archaeology of consumerism, but their empirical studies exhibit surprising convergences in subject matter, problem definition, methods, and in the commensurability of results. This suggests that research on consumerism can integrate archaeologists across major theoretical cleavages, perhaps by fostering the growth of appropriate theory for linking consumer choice with large-scale processes of market societies (Spencer-Wood, 1987a:9–10). A consumerist archaeology also countenances, and gains strength from, asking both historical (particularistic) and scientific (general) questions.

The Contribution of Archaeology to Consumerist Studies

With so many researchers in so many disciplines now studying material culture, consumerism, and consumer societies, it is appropriate to ask what practitioners of archaeology can contribute to this

multidisciplinary enterprise. We suggest that archaeologists have much to offer; at the very least, we can introduce a modicum of methodological sophistication. Although investigators in countless disciplines have at last discovered material culture, the studies carried out are usually "material culture" in name only. The actual artifacts examined and analyzed are often limited to documents, including texts about other texts and questionnaires; and the discourses tend to omit a discussion of people actually making, distributing, using, and reusing the material culture at issue (Schiffer and Miller, 1999:5–6). Thus, an archaeological perspective, developed from nearly two centuries of hands-on experience with every sort of artifact, can, at the very least, furnish instruction on how studies of consumerism and consumer societies can be empirically grounded.

In particular, we suggest that a consumerist archaeology is built on the following methodological commitments:

1. A concern to describe and explain the time–space parameters of events and processes, such as manufacture and use, in the life histories of artifacts and artifact types;
2. An appreciation for the involvement of people in the entire suite of activities making up the life history of an artifact or artifact type;
3. The recognition that artifacts carry out diverse utilitarian and symbolic functions;
4. Employment of a comparative perspective, both diachronic and cross-cultural, but one that also acknowledges contingent, contextual factors in specific cases;
5. A commitment to achieving an understanding of the operating principles of technologies and artifacts and then using that knowledge when constructing explanations of variability; and
6. Use of a hands-on approach for recording the formal, spatial, quantitative, and relational properties of artifacts themselves.

Building on these foundations, archaeologists—perhaps uniquely—can obtain *comparable* evidence on consumption patterns that spans decades, even centuries. Thus, our storied "time depth" can furnish long-term databases for evaluating the abundant hypotheses, served up by investigators in many disciplines but seldom tested, that purport to explain the development of consumer societies. And, in striving to explain long-term patterns, archaeologists can formulate their own theories and models.

Drawing on modern material culture studies, historical archaeology, and ethnoarchaeology, we identify the kinds of long-term research programs that establish a framework for building an archaeology of consumerism.

First, we call attention to "foundational studies." These contribute two major kinds of information: (1) basic parameters of an artifact type or types—that is, when, where, and by whom it was manufactured; and (2) specific inferences about behavioral processes in the life history of artifacts, including materials procurement, manufacture, distribution, use, maintenance and repair, reuse, discard, and postdepositional processes. Although foundational studies themselves yield research products that can stand alone, as the name implies they are also building blocks for higher-level inferences and explanations. Examples include Noël Hume's (1970) work on British artifacts in Colonial America, Toulouse's (1971) classic work on glass manufacturers' marks, and Godden's (1964) universally referenced compendium of makers' marks found on British ceramics (see Lehner [1988] for an "encyclopedia" of U.S. marks).

A second set of research projects is concerned with elucidating the life histories of product types. Most product types in industrial consumer societies pass through three stages: invention, commercialization, and adoption (Schiffer, 1996:656–658). We now briefly define each stage.

In the *invention* stage, people—working alone or in behavioral components such as corporations—devise models and prototypes of new artifacts that can be used to demonstrate the invention to potential entrepreneurs or financiers. In evolutionary terms, invention is a major source of new variants; most inventions, however, fail to reach the next stage.

During the *commercialization* stage, products enter production and are brought to market, sometimes after a lengthy and costly period of research and development. Commercialization is often undertaken by corporations, but individuals, government agencies, and so forth can also bring products to market. Once the commercialization process is characterized—perhaps by drawing upon

data in antique collector catalogs or by reconstructing company histories through archival research, oral history, or both—a major goal is to identify the technological, social, cultural, and behavioral factors responsible for changes in the diversity of manufacturers and products. Another important focus in commercialization studies is to explain artifact designs. Specific designs represent compromises in performance characteristics responsive to varied technical, social, cultural, and behavioral factors (see Schiffer and Skibo, 1997).

Adoption is the purchase of commercialized products; this stage ends when the purchase of a product type, as *new* goods, ceases. Reliable data on adoption are surprisingly difficult to obtain from documentary evidence. However, the archaeological record itself, especially secondary refuse, is an important—often unique—source of information on adoption.

Many questions about technological change can be fruitfully considered in the context of adoption processes, particularly when there is competition between different artifact types or technologies (see O'Brien et al., 1994; Schiffer, 1996). In explaining adoption patterns, the archaeologist often takes various social groups as the unit of analysis, seeking to specify relationships between products and social groups defined, for example, on the basis of class, gender, ethnicity, and religion. Let us now look more closely at large-scale patterns of adoption, which furnish an important empirical basis for developing the archaeology of consumerism.

In his pioneering 1977 study, Stanley South identified artifact groupings associated with certain historical-period activity sets, such as food preparation in the household and military activities in frontier forts of the eastern United States. In subsequent studies, investigators have refined and extended South's patterns. All such studies, in effect, examine large-scale adoption/consumption processes and thus contribute directly to the archaeology of consumerism. As their units of analysis, these studies employ social groups or "behavioral components" (sensu Rathje and Schiffer, 1982; Schiffer, 1992:14–15).

Many archaeological studies of adoption have been carried out in relation to social class and ethnicity. The actual unit of analysis, however, is usually families and households whose socio-demographic characteristics are gleaned from documentary evidence. Consumption is inferred mainly from the contents of refuse associated with structures (LeeDecker, 1994). On the basis of household refuse samples, one generalizes about consumption patterns of socio-demographic groups.

The adoption/consumption patterns of task units, communities, regional systems, and empires can also be characterized. Because these larger behavioral components consist of ever-greater aggregates of households, variability in large-scale artifact patterning is explained in part by the factors that influence household consumption. Other factors are at work in the larger behavioral components because they contain organized religions, polities, corporations, and so on, which engage in their own consumption processes.

We propose that the kinds of studies just enumerated, which many archaeologists are already undertaking and for which methods are well developed, provide a firm foundation for approaching higher-level questions about consumerism. Indeed, it is time to step boldly beyond the study of consumption, which archaeologists have always investigated, to the study of consumerism. According to Martin (1993:143), consumption implies a process or means by which consumer goods and services move through the general economy; its study ranges widely to include the institutions that produce, market, and sell those goods and services. By contrast, the concept of consumerism extends well beyond acquisition; it subsumes the cultural relationship between humans and consumer goods and services, including behaviors, institutions, and ideas. It is potentially a unifying concept for many areas of scholarship (Martin, 1993:142–143).

Mapping Out the Scope of a Consumerist Archaeology

Martin (1993:142) outlines what she considers to be the most important thrusts of the study of consumerism: (1) the way material goods mark or confer position in a social hierarchy; (2) the role of fashion and demand in spurring economic growth and changing manufactures; and (3) the ways in which people can construct their own meanings for objects produced by themselves or others.

The themes identified by Martin are, of course, not new. Her point is that their contemporary study, within the context of consumerism, "moves the scholarly eye from institutional forces to personal choices" (Martin, 1993:142) and places more emphasis on the role of bourgeois consumers of nonutilitarian goods and services, particularly women, as agents for change in the material culture repertoire of a society.

In this section, we present a series of broader themes and related questions that can help to build on Martin's points to map out an expanded scope for a consumerist archaeology. While we agree that inquiries into the role of the consumer are central to any reasoned study of modern material culture, it is also important to consider a variety of other issues to help us round out investigations of makers, buyers, and users.

Structural and Behavioral Aspects of the Emergence, Growth, and Maintenance of Consumer Societies

How do structural factors, such as capitalism, mercantilism, relatively "free" markets (for goods, services, and labor), profit-making corporations not controlled by polities, lack of sumptuary rules, and social mobility, interact over time and contribute to the emergence of specific consumer societies? By what processes are a society's laws and regulations modified to provide favorable conditions for the growth of consumerism? By what general processes does any activity become "consumerized"? That is, how does it come about that an activity's competent performance requires continual expansion and updating of the required material culture? What do long-term changes in toys, games, models, and books reveal about the role of children's material culture in reproducing the values, attitudes, skills, and activities of a consumer society (see Berger, 1992; Formanek-Brunell, 1993; Schiffer, 1991). How have huge corporations, only loosely under the control of nation-states, reconfigured people's lives during the twentieth century by internationalizing manufacturing, marketing, and consumption? Although consumer societies are resource- and energy-intensive, under what conditions do concerns over resource and energy exhaustion begin to affect policies, activities, and technologies? What role is the ideology of "sustainability" coming to play in the maintenance of consumer societies?

The Effects of Consumerism on the Life Histories of Specific Products

When and how does novelty in material culture become highly valued as "progress?" How does the pursuit of novelty in products become actualized in the consumption patterns of middle- and working-class people? When, where, and for what products does the annual model change become an effective strategy for selling products to varying kinds of households and to other behavioral components? By what processes did the annual model change spread to an ever-greater variety of consumer, commercial, and industrial products?

Advertising and Communication

How are the mass communication media—newspapers, magazines, radio, television, and now the internet—involved in the maintenance and spread of the "novelty orientation" and other values necessary for the functioning of consumer societies? Magazine advertisements by the Radio Corporation of America in the 1920s proclaimed, "A Radiola for every purse." By what processes did price-based differentiation spread to virtually every kind of product—from houses to neckties?

Explaining Apparent Alternatives/ Reactions to Consumerism

Are certain "nonconformists" practicing strategies of resistance to consumerism, such as hermits, people of means who buy only used products or only "organic" foods, families without televisions, and ethnic enclaves that reject most modern technologies? In what ways do these people employ artifacts

to create meaning and define their own identities? What ideologies justify these lifestyle alternatives? Do institutions such as universities promote resistance to the vulgar ideologies of consumerism (that is, new = progress = good)? If so, are contrasting ideologies realized in different consumption patterns? How and why do handcrafted products of traditional societies become integrated into the consumption patterns of industrial consumer societies?

The Commercialization Process of Consumer Services and Societal Practices

How do religious observances and objects become secularized, commercialized, and consumerized? By what processes have personal services, such as grooming and medical diagnosis and treatment, been consumerized?

Ideological Expressions of Consumerist Societies

When and how did the ideology of science and technology as founts of wondrous new products become entrenched? How is this ideology related to the artifacts purchased by middle- and working-class people over the last century? How is the erection of monumental architecture in cities since 1850 related to changes in the relative wealth and social power of churches, polities, various kinds of corporations, and sports franchises?

Where to Look for Answers

Many of the questions above have been raised previously by students of consumerism in other disciplines. However, the answers tendered by these investigators tend to be just-so stories, foundering on abstract discourse divorced from the materiality of human life. In contrast, the archaeological perspective, which illuminates concrete consumption patterns by exploiting myriad lines of evidence in relation to artifact life histories, furnishes an empirical foundation for research on consumer societies that goes well beyond the study of consumption itself. Below we provide an example of how a particularly informative material class—historical ceramics—can be used to study some of the more salient questions related to consumerism.

Why ceramics? As a material class, ceramics have long been a favored focus of analysis for both prehistoric and historical archaeologists. In addition to being plentiful in archaeological deposits, they are the primary tools for establishing chronology and site function, and are also used to establish behavioral information about such topics as the social status, ethnicity, and foodways of a site's prior occupants. Being at the same time fragile and durable, ceramic objects tend to enter the archaeological record fairly frequently and survive to be recovered at a later date. Because there is such wide variability in ceramic composition and style, wares are readily identifiable with adequate study.

The example brings together pieces of information from archaeology, the decorative arts, history, and economics to illustrate that a consumerist approach is a viable means of integrating multiple disciplinary perspectives. To explore the feasibility of using this approach, we first outline the state of "foundational" knowledge about the topic and provide contextual background. We then briefly consider the life history of ceramics made in a particular late-nineteenth-century "style"—the Japanese-influenced Aesthetic movement—before moving on to an assessment of the potential value of the information for investigating some of the higher-level questions regarding consumerism posed earlier. Although the Aesthetic movement flourished on both sides of the Atlantic, our primary focus will be on its expression in America.

Ceramics as a Mirror of Consumerism

As noted above, ceramics are perhaps the most ubiquitous material class found in archaeological sites dating to the historical period. Apparently, however, they represent a minor class of goods in terms of overall household expenditures (e.g., see Wettstaed's [1999] analysis of early-nineteenth-century day books from a store in the Missouri

Ozarks). Nonetheless, they are powerful tools for the archaeologist, and provide a range of information critical to site interpretation. Blaszczyk (1994:126) notes that "Expenditures on ceramics constituted a small portion of consumers' annual budgets, but the act of possession mattered more than the money spent. Ceramics were signs whose cultural value was derived from their inherent qualities and, to a lesser extent, from their prices." In this section, we consider a small subset of historical ceramics—those decorated in Aesthetic-movement style, and even more specifically those influenced by Japanese arts and crafts. Given a working knowledge of the technology of ceramic production and stylistic trends, we can use ceramics to study and illuminate many of the themes outlined above.

As background to the example, we offer a brief introduction to nineteenth-century trends in the decorative arts. The reader should keep in mind that two basic decorative styles (in all areas of design) will prevail at any one time: the style(s) of the moment ("high style," or "popular style") and traditional styles (Majewski, 1996). A ceramic example close in time to our own experience would be wares influenced by the tenets of modernism (stark design, minimal or stylized decoration, form incorporated into style) produced during the 1950s compared with contemporary traditional wares, such as those decorated with floral decal sprays. The focus here will be on "high style," keeping in mind that these coexisted with traditional styles in the material culture repertoire.

Nineteenth-Century Styles and Ceramic Expression

Prior to the beginning of Aesthetic influences in design, two high styles—Neoclassical and Gothic revival (Samford, 1997)—followed one upon the other in popularity. The Neoclassical style was at its peak from the late eighteenth century to circa 1830, with an emphasis on classic revivals in architecture, ceramics, and other media. Some of Wedgwood's most famous products were made in imitation of Etruscan and classical Greek forms. Neoclassical ceramics were characterized by clean lines, symmetrical proportions, and restrained decoration. Transfer-printed motifs used at the time included urns, acanthus leaves, columned temples, and figures in classical garb. The Gothic-revival style was in vogue from the 1830s through the 1860s, and heavily influenced architecture, particularly public forms, but made an impact on the decorative and useful arts as well. Gothic-revival-style ceramics often exhibited angular, paneled shapes, which were frequently decorated with transfer-printed scenes of architectural ruins or buildings with turrets, arches, towers, or battlements.

These styles or movements were parts of the lengthy Victorian era (1837–1901), a critical time for the Western world in general, but in particular for America. Howe (1976:3) sees this era as one of crucial transformation for the United States, in terms of industrialization, rapid developments in knowledge and communication, immigration and significant population growth, urbanization, geographical expansion, and changing race relations. These transformations accelerated after the American Civil War. Literacy increased, and communication networks expanded. Industrialization and urbanization went hand in hand with modernization, which Howe (1976:7) identifies as the central process characterizing the era. In addition to social and economic effects, the modernization process also had cultural impacts (also see Stein, 1986). As a value system, Victorianism represented a combination of premodern modes of thought (patriarchalism, English common law) with ideals specifically linked to the modernization process (work ethic, delayed gratification, discipline, sexual repression, rational order, the cult of domesticity) (Howe, 1976:17–18, 25).

Cohen (1982:292) writes that the American home "from the 1840s to the 1880s mirrored the nation's transformation from an agricultural to an industrial society." More importantly for the purposes of our discussion, she notes that

> The home served as an accurate indicator of one's relationship to the industrial economy, not by accident, but as a result of the Victorians' contradictory attitude toward economic and technological change. Enthusiasm for, as well as anxiety toward, industrialization provoked both an appetite for new products and a need to incorporate them carefully into private life. . . . The home embodied a contradiction as both the arena for and the refuge from technological penetration. Insofar

> as people could tolerate this contradictory domestic environment, the home provided a setting for gradual adaptation to a technological and commercial world. . . . The parlor best represented this accommodation to industrial life [Cohen 1982:292–293].

Victorian parlors, whether located in Great Britain or in the as-yet-untamed American West, were crammed with carefully arranged, store-bought, mass-produced objects (Fig. 1).

During the decade beginning circa 1870, the ceramic "market basket" (described by Miller [1990, 1993]; also see Majewski, 1996; Majewski and O'Brien, 1987) available to American consumers primarily consisted of heavy, semivitreous white-bodied wares, either left plain or with molded body decoration (properly called "white granite," but also known as "ironstone" by antique collectors and some archaeologists). White granite and nonvitreous white-bodied earthenwares ("c.c.," or cream-colored) remained popular in some regions until well into the early twentieth century. Transfer-printed wares are relatively uncommon in collections from sites dating to the early 1870s, though some traditional styles continue, such as the willow pattern, which has been in continuous production since it was first introduced onto the market in the late eighteenth century (Copeland, 1980). Occasional traditional-style floral transfer-printed patterns were introduced to consumers during this period.

"Aesthetic" influences, however, dramatically changed Victorian design concepts, including those expressed on ceramics. The Aesthetic movement—the prelude to Art Nouveau—was one of the most original art movements in British history. It began in England in the 1860s as a reaction by a "few architects and designers" (e.g., Christopher Dresser) against Victorian excesses and eclecticism in decoration (Aslin, 1969:13; also see Kurland et al., 1993). The term itself refers to the introduction of principles that emphasized art in the production of furniture, metalwork, ceramics, glass, textiles, wallpapers, and books. During its height, from the mid-1870s through the 1880s, the movement affected all levels of society in both England and America (Aslin, 1969:13; Burke et al., 1986:19). The Arts and Crafts movement was also influential in Aesthetic design. In America, these two "styles," together with the Colonial Revival style, contributed to the formulation of an aesthetic that would replace European-inspired and technologically sophisticated styles (Cohen, 1982:293). William Morris's Gothic Medievalism and the work of the

Fig. 1 The parlor of an officer's home at either Fort Huachuca or Fort Bowie, Arizona, in the late nineteenth century (courtesy Fort Huachuca Museum)

Pre-Raphaelite Brotherhood also had an important impact on the Aesthetic movement, but probably the strongest contributions to the style were made by things Japanese.

Impetus for the movement came with the "opening up" of Japan in the 1850s (thanks to the American Admiral Perry)—an event that revitalized taste in Europe. Japanese or "Japonesque" motifs were applied everywhere—sprays of cherry blossoms and clumps of bamboo, birds, diaper patterns, fan shapes and cartouches with scenes within a scene, and stylized clouds to name but a sampling, were placed with casual asymmetry on everything from pots to postcards (Fig. 2). The Japanese decorative arts and architecture displayed at the 1876 Centennial Exposition in Philadelphia (and at expositions later in the century) began a widespread interest in Japanese art in America. This phenomenon is variously referred to as the "Japan Idea," Japonism, Japonisme, and the "Japan Craze" (see Cameron, 1986; Hosley, 1990; Rydell, 1984; Spencer, 1973).

Partly as a vehicle for expressing Aesthetic motifs on ceramic tablewares, teawares, toilet sets, tiles, and decorative wares, the use of transfer printing as a decorative method was "revived" and surged in popularity beginning in the late 1870s through the end of the century. The underglaze transfer-printing process began with engraved copper plates into which ceramic color mixtures had been worked.

Fig. 2 Transfer-printed earthenware plate showing typical elements of Japanese-influenced Aesthetic decoration. On reverse, printed diamond-shaped registry mark for April 8, 1881; pattern name "Louise"; and Wedgwood & Co. (Tunstall, England) printed unicorn mark with "Trade Mark" and impressed mark (Majewski/Fox Collection; Andrew Saiz, photographer, Statistical Research, Inc. [SRI])

Special papers were then laid over the plate to make an impression of the motif. The paper was then laid on an unfired ceramic body, smoothed on, and removed. The design was then dried on prior to glazing and firing (Drakard and Holdway, 1983; Majewski, 1996; Majewski and O'Brien, 1987). Colors used for late-nineteenth-century transfer prints differed in tone from those used earlier. Especially popular for "revival" transfers were subdued or even dull colors, particularly a range of dull greens and browns. The use of secondary or tertiary colors was the aesthetic reaction to the bright, harsh colors favored in the mid-1800s (Aslin, 1969:63).

An interesting variation includes non-Japanese motifs displayed in Japanese style or together with Japanese motifs (Fig. 3). This strategy was likely an attempt on the part of the creators of pottery designs to reach an even greater portion of the market, i.e., those who preferred more traditional motifs on their ceramics, such as English country scenes or architectural or nautical elements. Other colors were used in various anglicized adaptations of the style, e.g., turquoise and various other bright overglaze colors on bone china; pastels on majolica; and red, black, blue, and blue-black on transfer-printed earthenwares. One pattern might be transformed into many through the use of handpainted accents, gilding, or luster decoration. While underglaze transfer printing was the primary method of decoration for Japanese-style earthenwares, some earthenware and bone china forms were handpainted (painted under the glaze) or enameled (painted over the glaze).

Other wares were concurrently produced and marketed alongside Japanese-style earthenwares and bone china. The 1880s *Silber & Fleming Glass and China Book* (Silber & Fleming, 1990) includes examples of traditional wares with handpainted rim banding and others with floral borders. The catalog also includes undecorated white earthenware (c.c. ware), much of which is shown in utilitarian forms such as foot baths, bed pans, chamber pots, and slop pails—a perfect illustration of Miller's (1993) concept of "demand entropy" in operation. As applied to ceramics, demand entropy results in a situation where, through time, originally popular wares cycle down in price and form or drop out altogether.

Although monochrome outline decals, or lithotransfers, were used as the basis for handpainted fill-in by 1885 (U.S. Department of Commerce, 1915:156; Wood, 1953:77, 487), and thus would have been available to potters decorating in the popular Aesthetic style, it did not appear to be the decorative method of choice. Polychrome decaling, however, essentially replaced transfer printing by around 1900 (Fryman and Majewski, 1995), and in the 1950s was still "the most common decorative technique used for dinnerware" (Taylor, 1950:33).

By the 1890s, the Japanese style was no longer popular in ceramics, but asymmetrical placement of transfer-printed motifs (e.g., floral sprays) continued

Fig. 3 Earthenware plate with European-style arch within a "reserve," combined with Japanese motifs (asymmetrically arranged foliage and insects) arranged in Aesthetic style. Rectangular arch-within-a-block arch element is an imitation of a Japanese woodblock print. Printed diamond-shaped registry mark on base for May 6, 1882; "London" pattern mark; and mark indicating manufacture by Powell, Bishop & Stonier, Hanley, England (Hughes Collection; Gerhardt Alt, photographer; courtesy Vernon Hughes)

as did use of more muted hues and restrained handpainted color accents and gilding. A resurgence in popularity of flow-blue transfer-printed floral patterns occurred (on British and non-British wares), often on thinly potted bodies with some relief molding (Gaston, 1983). Also occurring late in the century were bold floral handpainted motifs combined with cut-sponge stamping, and vessels with transfer-printed stylized Chinese motifs, often with luster accents and other light color washes (exported to America from Great Britain and Holland). Both of these types can be considered traditional in the sense that they were reincarnations of styles popular in early centuries.

"China painting" on porcelain blanks (frequently Bavarian or French) was a favorite avocation for women during the last part of the nineteenth century and into the early twentieth century. Many pattern books with instructions were available and frequently featured Aesthetic designs, particularly those in the Japanese taste (Blaszczyk, 1994; Hosley, 1990; Wood, 1953). From the late 1890s until circa 1910, Art Nouveau-style motifs were popular with amateur china painters.

Aesthetic-Movement Ceramics as Case Study

An investigation of the Aesthetic movement—as expressed in the Japanese-style decoration used on ceramic goods—can provide useful insights into the development of consumerism in the second half of the nineteenth century. Although the movement was infrequently mentioned in publications on the decorative arts sources written prior to the 1980s, a considerable amount of research on its context and influence on various kinds of media has been accomplished since that time. From a decorative-arts perspective, much of the foundational work has been done. We essentially know when, where, and by whom Aesthetic-influenced artifacts were manufactured (see Blaszczyk, 1994; Hosley, 1990).

Much of the supporting data for answering these questions comes from backmarks containing manufacturer and temporal information found on Japanese-style pieces in private collections and museums, published sources, and archaeological specimens. While some Aesthetic-influenced wares were produced in America (see Blaszczyk, 1994), most were potted in Great Britain. Hosley (1990:154–160) lists some of the most well-known British manufacturers: Gildea & Walker; Brownhills Pottery Co.; Wedgwood; Henry Alcock & Co.; Edge, Malkin & Co.; Minton and Company; Royal Worcester; and Beleek. From 1842 to 1883, Victorian ceramics bore a diamond-shaped mark to indicate that the design or shape had been registered at the Patent Office in London (see Godden [1964:526–529] for information on how to "read" these marks). Registration provided protection from "design piracy" for an initial period of 3 years, and apparently could be renewed. Beginning in January 1884 (and continuing into the twentieth century), registered designs no longer appeared as diamond-shaped marks, but were numbered consecutively following the prefix "Rd." or "Rd. No." These trends in ceramic registration and marking illustrate that proprietary design was becoming an increasingly important concept by the mid-nineteenth century.

Still lacking, however, is a complete understanding of the behavioral processes associated with the life histories of these artifacts. As noted above, home interiors were the vehicle for displaying the occupants' level of articulation with the popular trends of the times. Hosley (1990:16) notes that "Where Victorian Americans at mid-century [1850] knew little more about Japan that its place on the map, a generation later Americans of all classes and backgrounds exhibited a cultlike fascination with the distant island nation." If we are to equate a person's intellectual acceptance of the "Japan Idea" with ownership of the material trappings of the movement, we are required to learn how effectively goods in Aesthetic style reached American homes of all social classes. This will allow us to begin to evaluate the movement's impact on American culture. A combination of historical and archaeological research can begin to fill in the gaps.

Historical sources are particularly useful for answering behavioral-process questions. Photographs, stereographs, and illustrations from contemporary printed materials of late-nineteenth-century home interiors may be used to document the use of Aesthetic ceramics and other items of material culture in decorative and useful

contexts (e.g., Blaszczyk, 1994:Fig. 10; Formanek-Brunell, 1993:Fig. 8; Frelinghuysen, 1986:Illustrations 7.1, 7.3, and 7.4; Hosley, 1990:Illustrations 90–98b). Illustrated period catalogs, such as those from Silber & Fleming (1990) and A. A. Vantine & Company (see Hosley, 1990:44), illustrate the range of items available in popular versus traditional styles at a particular time. A casual perusal of the Silber & Fleming catalog, originally published circa the 1880s, indicates that at least 50 percent of the ceramic items illustrated were decorated with Aesthetic-influenced Japanese-style motifs. Other useful printed materials include art books, periodicals, and variety and women's magazines, as well as domestic-advice books and women's "do-it-yourself" art manuals for decorating ceramic blanks.

Japanese-style ceramics may have been widely available to most consumers, but investigating issues related to consumer choice is more difficult. The archaeological record may provide some answers (see Majewski and O'Brien [1987] and Spencer-Wood [ed. 1987b] for discussions of this topic). Archaeological evidence for the distribution and pervasiveness of Japanese-influenced Aesthetic-style ceramics must necessarily be cumulative and focused on household contexts. Descriptive and quantitative information on materials found in both urban and rural sites from throughout the United States is necessary to understand how extensively the "Japan Idea" penetrated all aspects of American life. Consistency in identification and recording of ceramics decorated in this style is an essential first step (see Hosley, 1990; Samford, 1997).

As noted earlier, excavation must be accompanied by archival research designed to uncover the identity, social class, family composition, and ethnicity of a site's occupants if we are to understand the behavioral implications of the materials recovered. Optimal contexts for analysis are those features that can be linked to known households. Recent work on late-nineteenth-century deposits at the Superblock site in downtown San Bernardino, California, has yielded promising results in this vein (Doolittle and Majewski, 1997). One of the 50 features excavated at the site, a privy, was associated through archival research with the dwelling of a particular middle-class family—the Whaleys—who apparently lived at that location from circa 1860. Almost 800 ceramic sherds representing 150 vessels were recovered from the privy, and most dated to the 1870s and 1880s. Figure 4 illustrates two examples of transfer-printed vessels from this feature that were decorated in Japanese-influenced Aesthetic-movement style. The next step would be to begin constructing profiles of ceramic use by this household and other contemporary households in the area and elsewhere (e.g., percentage of popular versus traditional wares, range of forms used, etc.). Comparisons of ceramic use profiles and use profiles for other archaeologically recovered Aesthetic-influenced materials with those from contemporary sites in California and elsewhere could be used to build a broader understanding of the impact of the Aesthetic movement on the material culture of the times.

In situations where households can be linked to archaeological deposits, what can be learned about the "lady of the house"? Women were likely the primary purchasers of Aesthetic-style goods that were used and displayed in the home. Formanek-Brunell ([1993:15–17] and caption to her Fig. 4) notes that shopping had become a central activity for middle-class women after the American Civil War. At this time, Americans were becoming increasingly affluent. Personal incomes were rising, and new outlets were available to consumers—retail stores for those who lived in urban settings and mail-order catalogs for those who did not. Middle-class Americans were now able to purchase items formerly available only to the wealthy. First published in England in 1868, Charles Locke Eastlake's *Hints on Household Taste in Furniture, Upholstery, and Other Details* was published in America in 1872 (Voorsanger, 1986:423). Lynes (1949:100) notes that households were completely refurbished to follow the book's teachings.

In summary, studies of Aesthetic-influenced Japanese-style ceramics, whether based on documentary or archaeological evidence (or both), can provide specific information on the life histories of products associated with this apparently pervasive, but short-lived movement. Understanding the role of international expositions in promoting material culture associated with the Japan Idea is pertinent to the invention stage (Blaszczyk, 1994; Hosley, 1990), and an intensive examination of available documentary and published materials of the period would illuminate the commercialization stage. Study of the latter would also benefit from an analysis of the source materials for the engraved copper

Fig. 4 Transfer-printed Aesthetic-movement ceramics from a privy feature associated with the Whaley household at the Superblock site, San Bernardino, California: *left*, reconstructed, partial earthenware toothbrush holder decorated with an unknown pattern (unmarked, but may have been potted by William Brownfield & Sons, Cobridge, as early as 1880); *right*, reconstructed, partial earthenware saucer with a printed diamond-shaped registry mark for January 6, 1881, and pattern name "Paiva" on the base (probably manufactured by Benjamin & Sampson Hancock, Bridge Works, Stoke, England) (SRI archives; Cynthia Elsner Hayward, photography; courtesy SRI)

plates used in transferring Aesthetic designs to ceramic bodies. For example, one might investigate why some of the designs were more Europeanized. The adoption stage can be elucidated through analysis and interpretation of the archaeological record. Particularly interesting will be archaeological data relating to "competing" artifact types (popular versus traditional) being produced at the same time.

Moving Beyond Foundational Studies

In the previous section we introduced the reader to some of the foundational information necessary to understand Japanese-influenced Aesthetic-movement ceramics from the late nineteenth century within a consumerist perspective. Emphasis was placed on defining the basic parameters of the artifact type and making specific inferences about behavioral processes in its life history. Here we would like to briefly relate this information to some of the broader themes raised earlier.

Perhaps most obvious is the potential of the example to contribute to our understanding of the structural and behavioral aspects of the emergence, growth, and maintenance of consumer societies. We have outlined some of the processes that led to consumerization of Aesthetic-movement ideals. During its 10-year heyday, the movement made an enormous impact on the material culture of the late nineteenth century. Traditional nineteenth-century British design, and most early American design, was based on the symmetrical arrangements of elements

in decorative arts, architecture, etc. Aesthetic designers introduced an entirely new grammar and syntax of ornament. Some design innovations introduced during this period, particularly the asymmetrical arrangement of motifs, carried over into the subsequent Art Nouveau and Art Deco popular style movements. Thus, consumers were in a sense "preconditioned" to accept the later styles that were completely alien to their way of thinking. Nonetheless, while the Aesthetic movement may have emerged as a "contradiction" or "opposition" to contemporary Victorian norms, it coexisted with traditional Victorian material culture and in some instances even merged with it.

Written sources emphasize the pervasiveness of Aesthetic-movement goods in American culture. This is difficult to quantify, however. We have suggested that data from the archaeological record, while challenging to collect, may provide some of the best information on the actual use of these materials by members of different social classes. In addition, the ideological impacts of the movement (see Stein, 1986) have yet to be fully investigated from an archaeological perspective.

The Aesthetic movement might accurately be termed a "late-nineteenth-century fad." As such, looking at how it played out can help us to understand the role of fashion and demand in spurring economic growth and changing manufactures, one of Martin's (1993) most important thrusts for the study of consumerism. The roots of the movement are traceable to the opening of Japan in the 1850s, and its success in America was fueled by a combination of factors: the consumer's desire for something new (a reaction against Victorian excess); increased prosperity following the Civil War; expanded opportunities for consumption through catalogs and retail stores; and expanded communication, transportation, and advertising networks. By the late nineteenth century, women were the primary purchasers of household goods, a fact that has not received the attention it deserves in research on consumer behavior and the consumerization process.

This example also contributes to our understanding of how and when novelty in material culture becomes valued as progress. Products and artifacts have always gone through cycles of popularity, and demand entropy (Miller, 1993) is one way of characterizing what happens when an item is on the downward spiral. Take the example of Josiah Wedgwood's creamware, developed in 1743 but not perfected until the 1760s (Young, 1995:9). During the 1770s, the ware graced the tables of European royalty; by late in the century the elite were losing interest, and use of the ware was more widespread among the middle and lower classes. By the early 1800s, creamware had been replaced in popularity by other wares, but as a ceramic body it persisted until well into the twentieth century. In the late nineteenth century, it was known as "c.c. ware," and was one of the materials of choice for manufacturing chamber pots, urinals, invalid feeders, and foot baths!

Something different began happening in the late nineteenth century, however. It is interesting that at the height of the "Japan Craze," Japanese-influenced Aesthetic-movement motifs appeared on ceramics of all levels of quality and cost, from bone china down to the cheapest earthenwares. This may be one of the earliest examples of price-based differentiation (though we suspect it was also occurring with goods other than ceramics). We suggest that by compiling quantitative and distributional information on popular- versus traditional-style tablewares, teawares, and toilet sets, it may be possible to gain insight into how "novelty" products become actualized in the consumption patterns of middle- and working-class people.

Studying "high style" material culture invites a consideration of alternatives to consumerism. In the example we presented, we noted that many consumers continued to choose traditional forms. Manufacturers of Aesthetic-style goods even catered to potential consumers by producing "toned-down" expressions of the style using non-Japanese motifs (see Fig. 3). The coexistence of traditional and popular styles is an important research theme in the study of consumerism, and is one that can benefit from information provided by the archaeological record.

Aesthetic-movement design elements even made their way into the late-nineteenth-century bathroom. In keeping with the Victorian obsession with cleanliness and sanitation, a profusion of hygiene-related products were available. In the ceramic medium, "toilet sets" contained numerous pieces, including basins, ewers, slop pails, and a variety of soap dishes and toothbrush holders (see Fig. 4). Well over 50 percent of the examples

illustrated in the Silber & Fleming 1880s catalog (Silber & Fleming, 1990) are decorated in Japanese-influenced Aesthetic style, which illustrates that the influence of the movement had spread into even the most personal areas of life.

An equally fascinating topic for further study relates to how children's material culture serves to reproduce the values, attitudes, skills, and activities of a consumer society. In an important study of the relationship of dolls to the commercialization of American girlhood during the period 1830–1930, Formanek-Brunell (1993:20) points out that in the decades following the Civil War:

> Adults expected girls to imitate the new rituals of high society with their largely imported dolls in their nurseries. Elaborately dressed dolls were thought useful in the instruction of social conventions such as housewarmings. Far more common, however, were dolls' tea parties, frequently depicted in stereographs, trade-cards, and books like *The Dolls' Tea Party*. Adults proudly noted that "The children's doll parties of to-day are counterparts of grown-up people's receptions."

There are numerous extant complete or partial examples of children's tea sets decorated with Japanese-influenced Aesthetic-movement motifs in museums and private collections, which apparently indicates that the "Japan Idea" had been deliberately introduced to society's youngest members in a way that would be used to prepare them for their roles as adults in a consumer society.

The themes touched upon here are only a few of those that can be used to investigate the development of consumerism. To build upon the work presented here, comparative studies would be productive, focusing on ceramics decorated in later styles, such as Art Nouveau and Art Deco, or on earlier styles (e.g., Rococo, Neoclassical, or Gothic revival). This would not only allow for the development of a temporal perspective on the themes discussed here, but could suggest other equally productive avenues of research.

Conclusions

In this chapter, we have outlined a strategy for investigating the development of consumerism that is grounded in compilation of foundational and life-history information about material culture and artifacts. This essential basic information is then used to investigate broader themes. Our approach is multidisciplinary, cumulative, comparative, and inclusive, but emphasizes the unique contributions that can be made using archaeological data.

Archaeologists, especially historical archaeologists, are in a position to use their intimate familiarity with archaeological and historical evidence pertaining to particular classes of goods to answer higher-level questions about consumerism. The information presented in the case study is only the beginning, but we can already envision linking what we have learned about the consumerization of household ceramic goods with information about other classes of material culture. It is our earnest hope that the ideas presented here will foment synergies among practitioners of ethnoarchaeology, historical archaeology, and modern material culture studies to develop an explicit archaeology of consumerism, an enterprise that will contribute importantly to discussions of consumerist societies taking place across the academy and in other contexts.

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Artifacts and Personal Identity

Carolyn L. White and Mary C. Beaudry

I shall never have a professional attitude or remember the exact dates of the Assyrian kings, but I do take an enormous interest in the personal aspects of what archaeology reveals.

—Agatha Christie

Introduction

Although historical archaeologists have generally neglected to apprehend the potent meanings of personal possessions, the field is stirring. All too often, personal artifacts have been subsumed into broader categories of artifacts, their meanings blurred or diminished. Personal artifacts have been assessed as subgroups classified by material, resulting in a muting of the individual significance of particular artifacts and a preference on the part of analysts to deal with objects recovered in large quantities. Personal artifacts have occasioned individual assessment sporadically, and interest in these artifacts has begun to shift from limited interpretation to more interpretive contextual approaches.

In this chapter, we trace the shifts in approach to personal artifacts and explore the ways that archaeologists scrutinize these small finds to understand identity construction. Three interrelated lines of inquiry and influence in archaeology have merged to bring about a shift to exploration of personal items and identity construction. First, the examination of the lives of enslaved African Americans sparked intensive interest among historical archaeologists in examining race and ethnicity. Concurrently, archaeologists sought more effective and complex ways of examining gender in the archaeological record. These trends, as well as emerging interest in considering class, were part of a larger movement within the field—parallel to developments across other disciplines—in the examination of identity. A second important influence was a renewed interest in less commonly examined classes of artifacts, stimulated, in part, by a frustration with traditional modes of material culture analysis to engage with race, gender, and class. Third, historical archaeologists joined with cultural anthropologists in a dedicated interest in the examination of the body and the manifold ways in which embodiment can be examined through material culture. These three influential threads surface in current work in the exploration of identity through personal possessions.

Examining Identity

In recent years, identity has been taken up with great enthusiasm by archaeologists, and scholars have explored the topic in a variety of ways.

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Gender, race/ethnicity, status/class, and age have been pursued most rigorously by historical archaeologists, though additional forms of identity—nationality, sexual preference, religion, marital status, familial ties, and any other number of possible groupings—provide intriguing possibilities for investigation. Historical archaeologists have become more sophisticated in their understandings of the ways that such aspects of cultural identity are shaped and considered, as a corresponding critique of approaches to the analysis of identity has highlighted what has, at times, been a restrictive view of the construction and conceptualization of identity.

The concept of identity is complicated, paradoxical, and culturally situated in time, place, and society. Identity is at once both imposed by others and self-imposed, and is continuously asserted and reasserted in ways that are fluid and fixed. Identity can lie at the individual level and at the broadest of imaginable scales as it defines a person both as part of a group and as an individual.

Initial work on identity within the field of historical archaeology concentrated on single aspects of identity, most commonly ethnicity or gender. These pursuits were not framed as inquiries into identity per se, but rather as investigations of the lives of enslaved African Americans and women. This narrow focus allowed archaeologists and other scholars to make important inroads into the construction of gender and ethnic identity. The late 1980s and early 1990s exhibited important work, particularly in terms of raising the profile of the lives of African Americans in plantation contexts (Samford, 1996) and of women in eighteenth- and nineteenth-century households (e.g., Seifert, 1991).

As more scholars approached topics of gender and race in archaeological contexts, the pursuit of these issues became more nuanced and shifted toward explorations of the ways in which gender, race, and class shaped *and were shaped by* individual lives. The percolation of post-processualism into American archaeology and the rise of interest in "interpretive" approaches to archaeology encouraged scholars to engage with issues of individual agency and shifted attention to the ways in which race/ethnicity, gender, class, etc., contributed to the construction of individual identity in the past (Hodder, 1986, 1989; Shanks and Tilley, 1987a, 1987b; Thomas, 1996; Tilley, 1990; Wobst, 1977).

The mid-1990s were characterized by an intensification of interest in the exploration of race, gender, and to a lesser degree, class, sparking many important contributions to an increased understanding of the activities and archaeological signatures of women and African Americans (see Paynter [2000b] for a detailed overview of developments in the analysis of race, class, gender, and state formation within historical archaeology). While these investigations still were not framed as investigations of "identity," the pursuit of gender and race in the archaeological record was perceived as meriting extensive exploration. Two notable examples are Wall's (1994) examination of gender in nineteenth-century New York and Ferguson's (1992) influential volume on early African America. Both used archaeological materials to examine the lives of understudied groups, and each placed primacy on a single aspect of identity. Nevertheless, the relationship between gender, class, and race is implicit in each study.

The intensifying interest in aspects of gender, race, and class resulted in a parallel examination of the ways in which archaeologists investigate what was becoming known as "identity." One important result of this self-examination was an increasing awareness by historical archaeologists of their tendency to focus on particular aspects of identity to the exclusion of others, as noted by Scott (1994), who stressed the importance of an expansive, multistranded perspective on race, class, and gender. Recent and current research demonstrates a trend toward more complex understandings of the intricacies of identity, as many archaeologists embrace multiple elements of identity, even if one aspect of identity is a main focus (Delle et al., 2000; Funari, 1999; Mullins, 1999; Orser, 2001; Rotman, 2005; Yentsch, 1994).

This work is beginning to broach the complexity and draw out the richness of such lines of archaeological inquiry, deepening understanding of how aspects of identity are woven together, and moving toward an incorporation of broader conceptions of identity construction than those based on a single, often externally imposed, aspect of identity. As Paynter (2000a:11) notes, "Increasingly, historical archaeologists are writing with a different ontology, one that embeds material culture within systems of meaning and action, one that gives objects an active voice in cultural practices."

Material Culture

While archaeologists are keen to obtain new technical and temporal information about the artifacts they recover, artifact analysis is most commonly a means toward interpreting archaeological sites on a broad scale rather than an explicit vehicle for examining identity. In the 1980s and 1990s, as archaeologists considered expansive questions of the making and meanings of landscapes and contemplated cultural changes within and across households, analytical approaches to artifact assemblages emphasized typology, identification, and chronology over interpretive approaches (Cochran and Beaudry, 2006). By and large, archaeologists looked to artifacts as indexes of, for example, household change, feature dating, and other broadly stroked interpretations of a structure, property, or landscape. In seeking ways to generalize about the activities on archaeological sites, archaeologists have grouped individually meaningful artifacts under broad categories, diminishing their potential to help us understand the meanings of these compelling material sources (Beaudry, 2002; Loren and Beaudry, 2006).

Glass and ceramics, recovered in large quantities, have commanded the preponderance of archaeologists' attention. Analysis of other artifacts has generally relied on a few comprehensive archaeological guides (Deagan, 1987, 2002; Noël Hume, 1969), works by scholars from other fields (e.g., art historians, curators, and collectors), and on a small number of artifact studies (Brauner, 2000; Karklins, 2000; Noël Hume et al., 1973).

As the archaeological probe of identity construction has grown—in terms of the numbers of scholars engaged and the increasing globalization of identity as a component of research agendas—archaeologists have developed innovative approaches to interpreting the archaeological record, including the incorporation of marginal categories of material culture, particularly "small things" (see Cochran and Beaudry, 2006; Loren and Beaudry, 2006). It has taken some time for archaeologists to employ certain types of artifacts to engage aspects of gender, race, ethnicity, and age and to develop new approaches to material culture analysis. Attention to personal artifacts in particular was sparked by interest in various threads of identity and by a burgeoning interest in the anthropological examination of the body.

The notion of material culture as integral to human action has fueled this interest, as archaeologists and other scholars have recognized the recursive nature of the relationships between objects and people. Studies of object biographies, emphasizing the accumulated meanings imbued in and imparted to objects and the multidirectional transformation of objects and people as both subjects and agents bound to one another, have fostered interpretive approaches to material culture (Gosden and Marshall, 1999:169, 177; Kopytoff, 1986). Further, the ability of historical archaeology to work at varying levels of scale, on a global level as well as on a small or microscale, has encouraged innovative uses of material culture (Gilchrist, 2005), identity construction being one of the main venues for small-scale, detailed studies.

An initiative of the Museum of London, "Biographies of London Life," has established a series of research goals based on "the archaeology of Londoners and their things" (Hicks and Jeffries, 2004; Nixon et al., 2002). One of the areas that archaeologists seek to examine through the archive of collections and documents from sites in London is identity, particularly in relation to ethnicity and social status (Nixon et al., 2002:85). Jeffries, in his study of ceramics from Spitalfields in East London, where in the late seventeenth century Huguenots formed a community centered around the silk-weaving industry, sought to answer the question "how important would it have been to these newly displaced people to use a French-made and decorated dish, rather than an English dish?" Apart from a very few vessels that might have had symbolic value in Huguenot society, ceramics from Huguenot household deposits throughout Spitalfields did not contain French pottery. Jeffries surmises that "the community reflected its cultural identity not through its possessions, but in other, more socially visible ways (such as language, religion, cuisine and dress)" (Jeffries, 2001:61). Thus, Jeffries concludes, given that the concept of ethnic identity is difficult to define because it is complex, multifaceted, and not fixed, the usual paths followed by archaeologists may not suffice; other sorts of evidence—of the sort, for instance, that

might permit the archaeologist to delineate distinctive culinary practice, if it exists—must be recovered, recognized, and interpreted (Jeffries, 2001:62).

Looking at the Body and the Presentation of Self

The body has become a focal point across multiple disciplines, including archaeology, cultural anthropology, philosophy, feminist theory, fashion theory, and social theory. Scholars interested in gender and sexuality have been particularly active in the analysis of the body (Farnell, 1999). A wave of publications in archaeology from a broad spectrum of culture areas and time periods attests to the body as a topic of specific inquiry (Fisher and Loren, 2003; Hamilakis et al., 1998; Lindman and Tarter, 2001; Montserrat, 1998; Rautman, 2000). Archaeological examinations of the body typically consider it either as a scene of display or as an artifact. Both of these approaches relate directly to the construction of identity, though the former is certainly more common (Meskell, 1999:42).

Examination of the body and the presentation of self are critical constituents in the pursuit of the construction of identity through personal artifacts. The body is the common locale for individuation, as identity is enacted on the surface of the body and through bodily action (Butler, 1990). The body, and more generally, embodiment, is a touchpoint for multiple aspects of the archaeological past. As Meskell has outlined, materiality—vis à vis the ways that people eat, sleep, move about, and so on—is part of embodiment, and the ways that cultural contexts create corporeal style and constitute bodies are a critical part of embodiment. This sort of appreciation of life on an individual scale, what it is like to be in one's own body, to live and act as an individual being, and in turn, of how individual ideas of the self are reflected through material culture, are important elements in the examination of personal artifacts and their relationship to identity construction. Aspects of sex and gender, as well as other components of identity, are critical components of embodiment (Meskell, 1999:37).

Manipulation of the body through voluntary and involuntary measures occurs through assorted means, described as inscription (for a detailed discussion, see Grosz [1994, 1995]), and many of the manipulations occur on the surface of the body. Aspects of bodily manipulation and inscription such as lifestyle, habits, postures, and the decoration and elaboration of the body have archaeological correlates that can be examined (Grosz, 1994). Personal adornment is the recoverable evidence of the act of inscription, of the act of inscribing and manipulating the body (White, 2005:4).

Fisher and Loren explore the relationship between the body and identity, noting that through "dress, ornamentation, posture, gesture and representation, an individual has the ability to 'put on a social skin,' allowing self-identification as a member of a larger or different social or interest group" (Fisher and Loren, 2003:225). They underscore the importance of the concept of embodiment, and the importance of contextualizing the body within the experience of the individual. The ways that individuals experience and occupy social and physical landscapes is as critical to the development of identity as what one wears on his or her body (Fisher and Loren, 2003:229).

Personal Artifacts and Identity

As a class of material culture, personal artifacts hold great potential for examining individual lives, particularly along lines of gender, ethnicity, class, age, though aspects of nationalism and regional identities have been explored as well. When people engage in various activities, their actions reflect individual choice as well as the norms and expectations of the broader society. The set of choices is restricted by the available materials and by the assessed set of options for an individual, which, in turn, is constrained by diverse lines of identity, such as gender, ethnicity/race, class/status, and so on. The physical action, whether clothing one's body, taking up a needle and thread, engraving initials on a spoon, or washing clothing, is undertaken in a manner that lies somewhere on a continuum of enacted intertwined social identities. As Butler

(1990:33) has described, gender identity is something that is performed; it is enacted through "the repeated stylization of the body, a set of repeated acts within a highly rigid regulatory frame that congeal over time to produce the appearance of substance, of a natural sort of being." The repeated acts are characterized as the mundane sorts of activities, such as bodily gestures, styles of assorted kinds, as well as movement, as the means by which gender identity is enacted to "constitute the illusion of an abiding gendered self" (Butler, 1990:140).

As archaeologists, we have access to a limited number of bodily acts and gestures though the analysis of personal artifacts, as those objects are the remnants of mundane and repeated acts. Personal adornment, tools of needlework, inscribed objects, food preparation and serving vessels, along with many other artifacts, are the physical remains of such acts undertaken as part of the performance of identity.

We extend the concept of performance to multiple lines of identity, and the value of the performance analogy holds as a mode of expression and maintenance of ethnicity, status, class, age, nationality, and others (see White, 2005:5–7). As noted, these various lines must be examined as commingled aspects of identity that may be present in any number of combinations depending on the individual or group under examination (see Fisher and Loren, 2003). As Butler (1990:3) states, "it is impossible to separate out 'gender' from the political and cultural intersections in which it is invariably produced and maintained." This underscores the social, physical, and temporal specificity of identity and the mandate to examine the construction of gender within time and space with care. Because intertwined lines of identity are engaged through individual personal artifacts, it is critical to consider the use of such artifacts along expected modes of performance as well as use in contravention of expected social norms. Such differences in expected uses of personal artifacts can be points for rich exploration of difference (see Hall, 1999:193; Stahl, 1993:33, 251, 2001:33), an endeavor at the heart of the examination of identity.

Historical archaeologists sometimes recover evidence of identity constructed through a person's voluntary affiliation with a group constituted around common interests, a shared sense of purpose aimed at social change, ethnicity, or religious association (Anderson, 1971; Smith and Freedman, 1972). Anthropologists and sociologists refer to such groups as voluntary associations, a phrase that encompasses secret societies, religious associations, activist organizations like labor unions, environmentalist groups, and temperance societies, sewing circles, historical societies, and gun clubs. Recent scholarship examines voluntary associations as arenas of praxis, seeing group membership as a discursive strategy used in identity construction; an individual's participation in group activities serves as "a projection of the self as one who cares" at the same time that it justifies particular practices and courses of action (Aspraki, 2004:165). Voluntary associations, then, are entities through which imageries, symbols, and ideologies are projected and negotiated (Aspraki, 2004:137, 165); that people join and play active roles in such associations serves to underscore the point that identities are not about "'who we are' or 'where we came from' so much, as what we might become" (Hall, 1997:4).

What Artifacts Are Personal?

Examinations of personal identity and artifacts have drawn on an array of materials, but the most common are those that were associated with individuals. Sewing items, personal adornment, decorated clay pipes, and inscribed artifacts have received considerable attention. As noted above, it is the "small things" that often offer the greatest promise for understanding the multifaceted aspects of identity bound up with a person's actions and appearance (Deagan, 2002:4; Loren and Beaudry, 2006:257). Many of the objects with potential for nuanced interpretation are those worn on the body or used in conjunction with a person's physicality, those objects invoked in the performance of identity.

Personal artifacts may include any or all objects used by a restricted group, regardless of the way that group is defined. Another class of personal artifact is those used by an individual, belonging to one person and used exclusively by that individual over the course of the artifact's uselife or person's lifetime. Within this category of artifacts are

objects used by individuals and passed on to others through heredity—objects that see multiple, successive owners. Finally, the most narrowly defined kind of personal artifacts are those that are exclusively associated with the bodies of individual people—artifacts worn or used by a single person on or about their body. Personal artifacts can be defined in broad and narrow terms, and here we discuss items that fall across a spectrum.

Worn Objects and Identity

Personal Adornment

Archaeological evidence of personal adornment consists of elements of a person's clothing and accessories, and permits a reading, while fragmentary, of the ways that people physically constructed and constituted themselves through performance and inscription of identity (Butler, 1990; Grosz, 1994, 1995). Fashion, clothing, and dress are widely understood to be part of a system of communication, and personal adornment conveys individual and group affiliation across the fluid and changing constructions of gender, age, class, ethnicity, and other modes of identity (Barthes, 1983; Crane, 2000; Entwistle, 2000; Kuchler and Miller, 2005; Lurie, 2000; McCracken, 1988; Rubenstein, 1995). As Entwistle (2000:7) remarks, "dress or adornment is one means by which bodies are made social and given meaning and identity."

Several works have kindled increasing attention to personal artifacts. Deagan's (2002) volume on personal possessions addresses artifacts from Spanish and Caribbean sites. Deagan's approach to personal artifacts is encyclopedic; she briefly examines a wide range of objects including religious items, clothing artifacts, firearms, and coins, among other categories. Ziesing's examination of personal adornment from the Boott Mills boardinghouses in Lowell, Massachusetts, identified recovered buttons, studs, beads, brooches, pins, combs, hair ornaments, and leather, and she explored the significance of their excavated contexts from an interpretive framework centered on gender (Ziesing, 1989). While her analysis did not focus on identity per se, she employed the materials to describe the circumstances of the boardinghouse residents, particularly their purchasing power and consumer behavior. In the United Kingdom, a variety of publications on post-medieval personal adornment catalog large collections of artifacts excavated in London and Norwich, providing descriptive analyses and fine illustrations (Crowfoot et al., 2001; Egan, 2005; Egan and Pritchard, 1991; Margeson, 1993).

Archaeologists have begun to explore the archaeological evidence of clothing and adornment intensively, viewing these small finds as highly charged with meaning and offering immense potential for exploring identity (Loren, 2001; White, 2004b): "Rather than simply dressing one's body, presentation of the body through dress and adornment offers one of the most visual manifestations of one's identity and self" (Loren and Beaudry, 2006:263). Personal adornment affords glimpses of the ways individuals manipulated and appeared in their bodies, and permits visualization of individuals in the past.

The act of dressing is a preparation of the body for presentation and observation in the world. When an individual dresses, he or she clothes the body in a manner that is appropriate, respectable, and desirable (Entwistle, 2000:7). Personal adornment artifacts were worn by single individuals, and thus indicate individual appearance, though linkage with a single individual is often impossible. Personal adornment suggests the clothing and accessories worn by one person, and reflects the construction of physical appearance on an individual scale (see Meskell [1999] for further discussion of scale in this sense). The interpretation of personal adornment at the scale of the individual reflects the choices people made in terms of clothing and accessories, as aesthetic choices, as reflections of individual preferences, and as sumptuary norms.

White examined individual sites and the community of Portsmouth, New Hampshire, in terms of clothing and accessories worn in the eighteenth and early nineteenth centuries and examined how residents visually constructed and constituted themselves across gender, class, and age boundaries (White, 2002, 2004b). Clothing fasteners and jewelry recovered at the Richard Hart site reflect intertwined class and gender identities. The assemblage is composed mainly of expensive artifacts that would have communicated socioeconomic status, particularly when worn in the larger context of a clothing ensemble that communicated elite class

status. The kinds of clothing suggested by the artifacts can be associated with men and women. Artifacts such as a gold earring, which reflects the construction of female gender, and a stock buckle and large shoe buckles, which relate to the construction of male gender, are particularly illuminating in regard to the commingled aspects of gender and class (Fig. 1). These artifacts reveal the *particular means* through which individuals performed expected gender and class identities via everyday and fancy dress (White, 2004a).

To stimulate the accurate identification and interpretation of personal adornment, White (2005) has compiled a guide to personal adornment artifacts that gathers technical and temporal information relating to clothing fasteners, jewelry, hair accessories, and miscellaneous accessories to dress in order to aid both in identification and interpretation of these potent artifacts, particularly with an eye toward understanding gender, class, age, and ethnicity. The guide presents personal adornment artifacts and outlines the potential of this class of artifacts for understanding the ways that these remnants of physical appearance communicated identities through performance and inscription.

Loren has explored the role of personal adornment and clothing in a number of eighteenth-century French and Spanish colonial contexts. At the site of Los Adaes, Texas, Loren has highlighted the close relationship between class and ethnicity in dress as

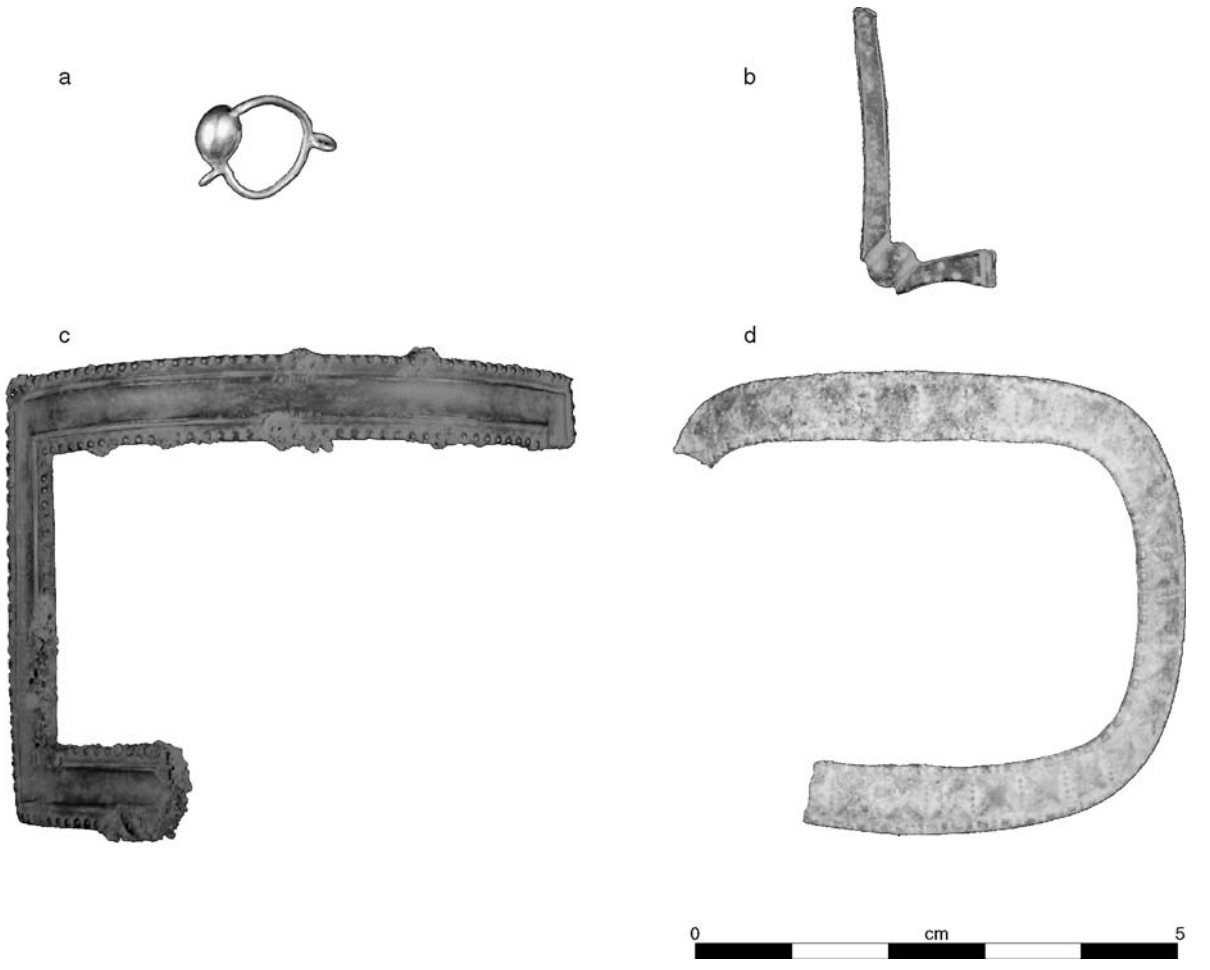

Fig. 1 Personal adornment artifacts from the Richard Hart site, Portsmouth, New Hampshire: (**a**) gold top and drop earring; (**b**) copper alloy stock buckle; (**c**) man's silver Artois-style shoe buckle; (**d**) man's copper alloy Artois-style shoe buckle with molded nailhead designs (photograph by Carolyn L. White)

well as the ways that personal appearance was manipulated for individual gain (Loren, 2000; Loren and Beaudry, 2006:265). Loren challenges the narrow interpretations of religious objects such as saint medals and crucifixes, asserting the need for archaeologists to be aware of the limitations of functional categories and the possibility of the adoption of Christian symbols not simply as a sign of conversion to Christianity, but that wearing these items in combination with other indigenous items allowed natives "to negotiate self in the mission world" (Loren and Beaudry, 2006:264). Loren explored hybrid fashions worn by Spanish and mixed blood inhabitants of Los Adaes, as indicated by the mix of European and Native American artifacts of personal adornment found at the site. Similarly, sites in French Louisiana provide evidence of a blend of colonial fashions in which buckles, buttons, beads, cuff links, tinkler cones, gun parts, and knives—items that are parts of clothing as well as items worn over clothing—suggest a fusion of styles of dress. In all of these colonial contexts, the *mélange* of dressing styles is a measure of the emergence of new identities on the colonial frontier (Loren, 2003:235; Loren and Beaudry, 2006:267). Loren views the mixed fashions as evidence of how people negotiated and resisted imposed differences by visually constituting political identities (Loren, 2003:236).

Personal artifacts worn on the body have been taken up by scholars examining African American sites in the southeastern United States and interpreted in a variety of ways. Beads are seen as evidence of African American individual expression (Yentsch, 1995), and blue beads have been correlated with African American presence on archaeological sites (Stine et al., 1996). Cowrie shells have been posited as personal emblems linking the wearer to West Africa (Samford, 1996:101). Buttons are recovered in relatively large quantities on slave sites and are interpreted as evidence of quilting and sewing or alternative materials for musical instruments (Kelso, 1986:34; Samford, 1996:111), as well as evidence of personal appearance and individual women's work.

Heath (1999:50) has examined clothing, jewelry, and hairstyles through personal adornment at Poplar Forest, Thomas Jefferson's Bedford County plantation in Virginia, to explore personal identity, social display, attitudes toward bondage, and the formation of African American ethnicity. The multiple factors that controlled individual access to personal adornment "resulted in patterns of choices that ultimately came to be seen as African American" (Heath, 1999:64). Galle's analysis of several slave dwellings at the Hermitage, Andrew Jackson's residence in Tennessee, focuses on the access that individuals had to goods, particularly clothing items (Galle, 2005). Galle examines adornment and artifacts relating to hygiene and appearance and concludes that one household occupant was able to translate a seamstress' skills into capital to trade with others in the community, increasing her household's economic and social status. Thomas and Thomas (2005:120) also explored personal adornment from slave dwelling contexts at the Hermitage as a means of explicitly exploring gender and ethnic identity, interpreting how "personal appearance ... helped to reflect and structure social identity," with gender playing a central role. Beads, hand charms, buttons, brooches, and cane tips were interpreted as evidence that the slaves had "considerable discretion in ... how they presented themselves." These studies share an interest in the analysis of personal artifacts to bring out individual agency and the multifaceted aspects of gendered behavior within a broader African American context.

Jordan (2005) examines buttons, buckles, and beads recovered from the banks of the Platteklip Stream in Cape Town, South Africa, a site of laundering activities. Among the identified items were large quantities of buttons, as well as other personal items identified as personal belongings unrelated to washing activities. Jordan critiques previous research on personal adornment in the context of slavery, arguing that there is a failure to interpret buttons, buckles, and beads as something other than personal adornment, producing a failure to gain insight into the material culture of enslaved women and homogenizing their experience. Her insightful interpretations of the multiple meanings of mundane objects reinforce the importance of paying attention to archaeological contexts and using appropriate recovery techniques.

Mortuary analysis from six cemeteries in the southeastern United States reveals distinctive gender and age differences in the use of personal adornment, particularly jewelry (Wilson and Cabak, 2005). Jewelry was found almost exclusively in women's burials; a single finger ring was identified

in a male burial. Jewelry appeared more frequently in the burials of young women, and beads were found with older women and children. Some of the jewelry was interpreted as corresponding with folk medicinal beliefs, e.g., regarding the curative properties of different sorts of beads and copper rings.

Recent work has also examined the role of raw materials used to fashion worn objects. Saunders (1999:247) explores the shifting meanings of pearls during the contact period in North America and the ways "recontextualization of indigenous shiny objects created new identities and relationships between Amerindians and between Amerindians and Europeans." For Native Americans, pearls were one type of brilliant matter among many. For Europeans, the value of pearls derived from their "availability, flawlessness, colour, and symbolic use as fashion items through which elites displayed (and through sumptuary laws reinforced) their social status, competing with each other and advertising their colonial possessions" (Saunders, 1999:253). The willingness of Native populations to trade items valued so highly by Europeans reinforced their image of Native groups as gullible and naïve (Saunders, 1999:249). Saunders considers the implications of the multivalent meanings of pearls not only as individual objects but also as items that fueled tensions between Native populations and colonizing Europeans.

Shoes and Textiles

Shoes and textiles have commanded limited attention from historical archaeologists; they are studied primarily to understand details of the construction and appearance of clothing and shoes. Textiles in seventeenth-century Native American cemeteries have yielded information about the use of European textiles by Native Americans in the contact period (Welters et al., 1996). Textiles from a seventeenth-century Boston privy have provided information about the form and construction of a number of Puritan garments, most specifically providing details about their trims, edges, and tailoring (Ordoñez and Welters, 1998). Butterworth's (1998) analysis of shoes from Boston privies elucidated features of everyday footwear in that city during the seventeenth, eighteenth, and nineteenth centuries.

A shoe's form supplies insight into visual appearance, fashion, and identity construction across an assortment of affiliations; wear patterns and repair episodes reveal aspects of the wearer's health, physicality, and social status (White, 2006). Shoes hold information not just about the exterior presentation of the body, but also about the physical nature of the body itself.

Excavations at the Mill Creek site in Boston, Massachusetts, revealed a cache of late-eighteenth- to early-nineteenth-century shoes. Worn by ordinary, likely working-class individuals, the shoes exhibit a degree of conservatism in a stylistic sense that is consistent with clothing and other components of dress made for and worn by individuals of little means. These were shoes that were valued for their function and utility—shoes made to withstand daily and demanding wear.

The Mill Creek shoes also are highly personal objects. Although the shoes rarely are individually differentiated in terms of fashion or design, they do convey aspects of individual identity. They retain the impressions of those individuals not only as reflections of their manner of dress, but also they reflect the physical health and well-being, the socioeconomic status, the age, and gender of their wearers. These aspects of identity are readable through the material, form, and size of the shoes (Fig. 2). The Mill Creek shoes show the wear and subsequent repair incurred in daily tasks by individual working-class Bostonians, and the general lack of elaboration reflects the subdued appearance of single people and of a community.

Fig. 2 A child's shoe from the Mill Creek site, Boston, Massachusetts, with heavy wear at the toe and heel (photograph by Carolyn L. White)

Inscribed Objects

Lucas (2004:186) notes that "an archaeology of colonial identity is largely a study of how ... subjectivities are constituted in the context of colonialism in terms of quotidian practice and the role material culture plays—through landscapes, buildings, and everyday domestic objects." One of the ways in which everyday domestic objects have been deployed in discourses of personal identity in colonial and other contexts is through inscription or marking.

Object inscriptions vary in nature, import, and intended uses. Ferguson (1992:110–113) studied marks on Colonoware bowls from sites in South Carolina, noting that "most of these marks were simple crosses or 'Xs.' In some cases a circle or rectangle enclosed the cross; in others, 'arms' extended counterclockwise from the ends of the cross." Ferguson discarded initial interpretations of the crosses as makers' or owners' marks, suggesting that they were similar enough to West African Bakongo cosmograms to link the bowls to early African American religious practices, practices that involved use of marked bowls in the preparation and administration of traditional sacred medicines (*minkisi*) or charms. He concluded that the evidence pointed to "an interpretation of the bowls as receptacles for minkisi or for use in a ritual similar to those involving minkisi" (Ferguson, 1992:155). Metal spoons found at sites occupied by enslaved Africans and African Americans throughout the American South bear markings that some interpret as cosmograms; others interpret them more broadly as evidence of African American ethnic identity, while still others note that the symbols inscribed on spoons or bowls could have held different meanings for different people (Ferguson, 1992:117; Heath, 1999; Leone and Fry, 1999; Wall, 2000; Walsh, 2001).

At its most basic level, the inscription upon everyday objects of names or initials signals ownership, marking an object as the possession of a specific individual. Examples of this form of inscription are often found on items excavated from shipwrecks—mess tags, spoons, and cutlery, for instance—a member of a ship's crew needed to personalize items that might otherwise have been appropriated by his mates (Carter and Kenchington, 1985; Switzer, 1978). Marked vessels have been identified in Overseas Chinese communities as well, e.g., in excavations of the Market Street Chinatown in San Jose, California. Marking possessions is a Chinese practice, pecked marks and characters signifying ownership as well as blessings and luck (Michaels, 2005:132; Voss, 2005). Ownership marks also represent attempts to fix identity; the monogram or name of an individual inscribed on an object creates a relationship between a person and an object that allows a person both to fabricate and to perform his or her identity as if it were stable and coherent, while in fact it is "an enacted fantasy or incorporation" (Butler, 1990:136).

Wine bottle seals are evocative as emblems of identity in post-1650 contexts. Pope discusses a seal bearing the name "Peter Fewling," a man who traded between Biddeford, England, and Ferryland, Newfoundland, around 1700. Because wine was shipped in casks, not bottles, the seal suggests the presence of the man as well as of his bottle and distinguishes Fewling from others in the colony who could not afford to drink their wine or brandy from bottles, much less from ones bearing a personal seal (Pope, 1990).[1] Cook (1995) interprets bottle seals as among the most legible symbols of identity; he points to two distinct seals bearing the name of John Carnes recovered from excavations at his home and workshop in Boston, Massachusetts. Bottles sealed with Carnes's name would have been used during formal dinners at which servants poured wine from the specially marked bottles into the glasses of Carnes's guests. Cook surmises that Carnes, a metalworker, made his own dies for the seals used on his bottles and that they might represent his identity as an artisan in pre-Revolutionary Boston as much as they did his wealth and status. He notes that wine bottle seals embossed with the full names of their owners are rarer than those bearing merely initials or ciphers and thus may have carried special import in discourses over identity in colonial contexts. It is difficult, however, to impute different forms of intentionality, different

[1] Pope (2004:273) notes there are "numerous initialed wine bottle seals, almost all of which can be identified with planters or shipmasters," each of which asserted ownership as well as literacy and power (see also Wicks, 1998).

motives, from similar objects (cf. Russell, 2004). Isaac Royall, Sr., of Medford, Massachusetts, in the mid-eighteenth century served costly wine to his guests from chamfered liquor bottles adorned with seals with the family coat of arms ringed by the legend "THE HON ISAAC ROYALL ESQ ●● PECTORE PURO" (Pure of Heart, the Royall family motto). The seal and the symbols it bears testify to Royall's unabashed self-assurance: "Such symbols were not lightly used. The allusions were purposeful and significant. They would have been understood and accepted as self-evident among the Royalls' colleagues and peers, who were finely tuned and trained to read such subtleties and nuances" (Chan, 2003:260). Isaac Royall surely went one better over Peter Fewlings and John Carnes who used wine bottle seals bearing their full names: Royall displayed his full title, his family crest, and through the family motto attributed to himself qualities that others may or may not have readily recognized in the man. All of these seals operated within discourses over identity—masculine, patriarchal identity—among English colonials.[2]

While relatively rare finds, bodkins—used for lacing up clothing and featuring an elongated eye through which lacing or cord can be threaded (Beaudry, 2006; Egan and Pritchard, 1991:379; Sullivan, 2004:74–75)—were often inscribed with the initials or name of their owner. Several examples from Virginia—three silver and four copper alloy bodkins from Jamestown, a silver bodkin from the Sandys site, and a copper alloy bodkin from Jordan's Journey—have been identified as headdress pins and classified as artifacts reflecting social status (APVA, 2005; Mallios, 2000:45, Fig. 51; Mouer and McLearen, 1991). Silver bodkins were found in a trash deposit at the site of a well-to-do household at the seventeenth-century Colony of Avalon; one has an ear scoop at one end and is inscribed with the initials "SK." It is likely that this bodkin belonged to Lady Sara Kirke, who as a widow maintained control of the profitable fishing plantation at Ferryland (Pope, 2004:273–274).

Bodkins were important and highly charged personal possessions, and they were not all hair pins (Holme, 1688; Sullivan, 2004:74).[3] What is more, not all bodkins were, as a class of object, equally suited to social display. Utilitarian base metal bodkins were used for lacing and dunning-in purposes and would have lacked *caché* as hair ornaments, while silver bodkins, especially those inscribed with the initials or names of their owners, were very special objects that in the seventeenth century were employed in the construction and performance of feminine identities.

As noted, excavated seventeenth-century silver bodkins at times bear the initials or name of their former owners, in most cases not engraved by a silversmith but inscribed or scratched into them by inexpert hands. Inscriptions or monograms were "small affirmations of literacy" asserting ownership at a time when literacy was rare, as Peter Pope (2004:272–273) notes, proclaiming " 'I am literate,' and, therefore, in the context of the time and place, 'I have power'."

Artifacts like marked pots, wine bottle seals, and bodkins are among the many types of objects through which discourses about self-identity and personhood were enacted. Such objects were invested with special meanings and with power and played important roles in the construction of identity.

Constructing the Self Through the Group

If we conceive of group membership as a strategy for "becoming," we have a means of interpreting the materialization of identity through the symbols and imagery a group's members use to represent themselves and their shared ideology. As described elsewhere, "materialization is the transformation of ideas, values, stories, myths, and the like, into a physical reality" (DeMarrais et al., 1996: 16). One

[2] Zierden found an eighteenth-century wine bottle with a seal marked "Mbrewton" near the home of wealthy Charleston, South Carolina, merchant Miles Brewton, in rubbish that originated in a locale used by Brewton's slaves for informal gatherings; the context of the find forces a reading of the seal that links the final use and disposal of the bottle not with its owners but with enslaved African Americans (Zierden, 2001).

[3] Sullivan (2004:72) reproduces a painting by a follower of Ludoph de Jonge of a woman sewing by candlelight (1650–1655) with a bodkin tucked under her cap serving *temporarily* as a hair needle.

particularly rich vein of symbols deployed on items of everyday material culture that archaeologists recover with some regularity is those of Freemasonry (Béresniak, 2003; Hamilton, 1994). White ball clay smoking pipes molded with Masonic emblems have been found around the world at a range of sites, including eighteenth- and nineteenth-century domestic contexts in New York (Dallal, 2000), an eighteenth-century domestic privy in Newport, Rhode Island (James Garman, personal communication, 2001), fur trade posts in the Northwest, Northern Plains, and Upper Midwest (Pfeiffer, 1998), and at the Tasmanian Aboriginal settlement at Wybalenna, Flinders Island, Australia (Birmingham, 1992). Pipes decorated with Masonic emblems were manufactured in Glasgow, Scotland, as well as in Belfast, Northern Ireland, where in 1990 archaeologist N. F. Brannon excavated quantities of wasters, many with emblems such as crossed compass and square with plumb bob,[4] at the documented site of the Ulster Pipe Works on Winetavern Street (Ponsford, 1991:161).

Britain exported huge quantities of pipes all over the world, but "there has been little attempt to characterize the different export styles produced for different markets" (Higgins, 1996:319), so we cannot state with certainty that only Freemasons had access to Masonic pipes. But we consider it likely that such pipes would be of greater significance to smokers for whom the symbols they bore had meaning (for a synopsis of Masonic symbols commonly found on clay pipes, see Dallal [2000:119–121]).

At times it is possible to link Masonic pipes with site occupants or users who may have been members of this widespread fraternal order (Dallal, 1994, 2000:128–129). Despite its image as the exclusive province of elite males motivated solely by self-interest, Freemasonry was characterized by a "striking degree of cultural pluralism" (Clawson, 1989:131). In America there were many ethnic lodges, including exclusively African American and Irish ones, and despite the segregation of lodges by race or ethnicity, membership in the "brotherhood" served "as an integrative mechanism which helped to pull all of these disparate groups into a cohesive nation" (Dallal, 2000:128).

Masonic ceramics other than clay pipes sometimes show up on archaeological sites. In New York, archaeologists found a creamware salt cellar and an overglaze-transfer-printed jug decorated with Masonic symbols in late-eighteenth- or early-nineteenth-century privy deposits at the Assay Site (Diane Dallal, personal communication, 2001). At the Spencer-Peirce-Little Farm in Newbury, Massachusetts, a small plate or saucer decorated exuberantly if inexpertly with Masonic motifs was found in the construction trench of a privy built in the first decade of the nineteenth century (Fig. 3).

Other finds include a small brooch in the form of the Masonic compass and square from the Rider-Wood Site in Portsmouth, New Hampshire, and sleeve or cuff links adorned with Masonic images in a probable tavern context at the late-eighteenth- to early-nineteenth-century Fort Vengeance Monument Site in Pittsfield, Vermont (Christopher Borstel, personal communication 2001). A black plastic button with crescent moon and star motif was found during excavations at the site of the African American Masonic lodge, in use from 1881 to 1950, in Arrow Rock, Missouri (Baumann, 2001:267–269). A trove of Masonic materials was found during renovations to the historical-period buildings around the Pueblo/Plaza of old Los Angeles, hidden in basement foundations. Among them was a box containing 11 embroidered aprons and collars and other ceremonial regalia (Roberta S. Greenwood, personal communication, 2001). Surely the items of ritual apparel were not the sort of thing Freemasons would have worn in public; they would have been reserved for the secret ceremonies held within the confines of the lodge. It seems likely, however, that buttons and cuff links, as well as pipes and ceramic vessels, most found in contexts far removed from the secretive lodges, might serve in contexts outside of fraternal meetings to signal membership in the brotherhood.

Other emblems of membership in voluntary associations are likely to have been worn openly, with a measure of pride. One such object is a celluloid pin-back button bearing the legend "United Mine Workers, Local 1515, Dixonville,

[4] These symbols were also meaningful to Orangemen. Therefore, in Northern Ireland, the market for such pipes could have been Masons or Orangemen, or both.

Fig. 3 A transfer-printed and overglaze-enameled white earthenware plate from the Spencer-Peirce-Little Farm, Newbury, Massachusetts; the farm's late-eighteenth- and early-nineteenth-century owners were Masons. Ranged around the rim are molded symbols associated with Freemasonry: hour glass; crescent moon and stars; sunburst or rose; open palm; crossed compass and square enclosing a "G"; acacia or rose; and the sacred book (photograph by Michael Hamilton)

Pennsylvania." The pin belonged to Alexander (Sandy) Maughan, whose family lived in a miner's doublehouse in the coal town of Helvetia, from the late 1920s to 1951. It was found at the rear entry of the west unit, in a transitional space between work and home. The pin postdates the recognition of the union by the Rochester and Pittsburgh Coal Company in 1933 (Metheny, 2006). Maughan wore his union button to signal his solidarity with his coworkers and their constant struggle with the mine owners for fair pay and safe working conditions.

These few examples of artifacts that signal participation in voluntary associations remind us that individuals construct identities through differing forms of self-actualization and practice. Joining a voluntary association and taking part in its rituals or its organized activities is an avenue taken by many an individual seeking to become the person that he or she wishes to be.

The growth of identity studies in historical archaeology vividly demonstrates writing with a different ontology (Paynter, 2000a:11), one that allows exploration of large issues such as identity, beginning

with an initial pinpoint focus on the individual, on personhood, then widening the scale to encompass fluid aspects of assigned, ascribed, and assumed identity along multiple, intersecting variables of age, sex, gender, race, ethnicity, nationality, and class. Identity studies grounded in social theory provide fertile ground for dialogues among historians, material culture specialists, and archaeologists.

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Darwinism and Historical Archaeology

Michael J. O'Brien and R. Lee Lyman

Introduction

In its classic formulation, Darwinism is a theory about why certain organisms do better in particular environments than do other organisms and hence over time leave more descendants. The theory says nothing about the archaeological record. Thus, archaeologists interested in applying a Darwinian perspective to the study of the material record have had to spend considerable time in constructing logical theoretical and methodological arguments as to how this can be accomplished in a nonreductionistic manner (e.g., Hurt and Rakita, 2001; Lipo et al., 2006a; Lyman and O'Brien, 1998; O'Brien, 1996a; O'Brien and Lyman, 2000, 2002a, 2003a, 2003b; O'Brien et al., 1998). Here, we hope to demonstrate that because of the wealth of information they often have at their disposal—artifacts, architecture, and documents—historical archaeologists have an opportunity not only to employ Darwinism at a scale rarely encountered when dealing with materials in the prehistoric record, but also to make solid theoretical and methodological contributions to evolutionary archaeology.

We begin by briefly examining the basic tenets of evolutionary archaeology, paying particular attention to how Darwinian evolutionism in general differs from other theoretical perspectives on the natural world. Several issues are important here, especially the nature of properties and units. How one views the former dictates how one categorizes objects and events in the natural world; one's views on the latter dictate how change is measured. As we show, one method that holds considerable promise for measuring change is seriation, which has roots deep in Americanist archaeology. We then turn to the most critical issue raised in this chapter: Can we use the archaeological record to study evolution or are we restricted simply to studying change? We argue for the former and show why we believe this to be the case. We conclude with a broadened perspective of some of the differences between evolutionism and other paradigms that currently exist in archaeology.

We find it impossible to do justice to the subject of evolution without bringing in at least a brief mention of biology and paleobiology, for it was in the marriage between these two disciplines that modern Darwinian evolutionism was founded and where conceptual and methodological issues have been hashed out. However, we attempt to keep these forays into the nonarchaeological literature to a minimum so as not to obscure the point that Darwinian evolutionism is the study of descent with modification. Everything else is largely superfluous to that simple point. Descent implies *continuous* heritability. Linking change to heritable continuity and figuring out how and why change took place is the cornerstone of Darwinian evolutionism, regardless of the organisms involved.

What Is Evolutionary Archaeology?

Darwinism, regardless of the discipline in which it is being applied, involves three steps: (1) identifying and measuring variation—that is, dividing variation

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into discrete sets of empirical units, or groups, using ideational units, or classes; (2) tracking those units through time and across space to produce a historical narrative about lineages of particular variants; and (3) explaining the differential persistence of variants and lineages in particular time–space contexts. Actually, the second step entails two substeps. What we might refer to as 2a involves creation of historical sequences—placing units in their proper time–space positions; 2b involves testing the historical sequences to see if they exhibit heritable continuity. Placing units in their correct historical sequence is important, but that in no way assures us that we are dealing with a hereditarily based sequence. Heredity is the basis of evolution, which is "any net directional change or any cumulative change in the characteristics of organisms or populations over many generations—in other words, descent with modification. It explicitly includes the origin as well as the spread of alleles, variants, trait values, or character states. Evolution may occur as a result of natural selection, genetic drift, or both" (Endler, 1986:5).

Evolutionary studies encompass "description[s] of the historical patterns of differential trait representation and arguments as to how evolutionary [processes] acted to create those patterns" (Jones et al., 1995:29). Both steps employ concepts embedded within evolutionary theory, such as *lineage*, or a line of development owing its existence to heritability; *natural selection*, which is a mechanism of change; a *transmission mechanism*, which ensures heritability and itself is a source of new variants (e.g., Eerkens, 2000); *invention/innovation*, another source of new variants; and *heritability*, which denotes continuity such that similarity is homologous. The last ensures that we are examining change within a lineage rather than merely convergence, in which case similarity is of the analogous sort. We return to the important issue of homology/analogy below.

Evolutionists study populations of things, and in archaeology the population comprises artifacts. It is "the differential representation of variation at all scales among artifacts for which [evolutionary archaeology] seeks explanations" (Jones et al., 1995:28). One might legitimately ask why analytical emphasis is placed on artifacts, when it is the makers of the artifacts who are evolving. The answer is simple. Evolutionary archaeology rests on the premise that objects in the archaeological record, because they were parts of past phenotypes, were shaped by the same evolutionary processes as were the somatic (bodily) features of their makers and users (Dunnell, 1989; O'Brien and Holland, 1995a). This is a shorthand way of saying that the *possessors* of the objects were acted on by evolutionary processes. That artifacts are phenotypic is nonproblematic to most biologists, who routinely view such things as a bird's nest, a beaver's dam, or a chimpanzee's twig tools as phenotypic traits, and it certainly is not problematic to paleobiologists, who have to rely on the hard parts of phenotypes (e.g., shells) to study the evolution of extinct organisms and the lineages of which they were a part. Archaeologists do the same thing, whether they are studying pottery, stone tools, or log houses. Historical archaeologists have even more access to past phenotypic variation because they often have at their disposal documentary information, which gives them an unparalleled means of testing for heritable continuity in the sequences of artifacts they construct.

Evolutionary archaeology treats time as a continuous rather than a discontinuous variable, although this in no way suggests that time cannot be sliced into manageable units for some kinds of analysis (O'Brien and Lyman, 1999). The important thing to keep in mind is that although time can be divided into units, there is nothing real about them. For example, we often distinguish between the prehistoric and historical periods, but there is nothing real about either unit. Rather, we have found a convenient juncture at which to slice time; the designations are simply bookkeeping devices. If the units *were* real, we would not argue about where to make the break. For example, in the United States, do we mark it with the arrival of the first Spaniards in the sixteenth century, or do we push it back to the arrival of Columbus in the western hemisphere? Is it legitimate to have a sliding scale depending on where one is in the world? The answer is, it really does not matter where we make the slice; time continues to flow regardless of how we subdivide it. What we are really interested in is using time to mark change along a continuum.

From an evolutionary perspective, change is "in terms of frequency changes in analytically discrete variants rather than the transformation of a variant" into another variant (Teltser, 1995:53). This perspective on change runs counter to the way change normally is viewed archaeologically—as a gradual or sudden transformation of a variant from one state to another. The distinction between change—the *replacement* of one variant by another—and transformation is difficult to overemphasize, stemming as it does from the deepest dichotomy in the natural sciences—the manner in which reality is viewed. There are two basic ways in which the natural world can be viewed. Failure to appreciate the distinction led archaeologists in the 1970s to follow a model of science based on the search for unvarying laws of nature (O'Brien, 1996b). Such laws exist, but they do not allow us to understand or predict evolutionary change (Wolverton and Lyman, 2000).

Darwinism is a *materialist* strategy for understanding change and it contrasts with an *essentialist* strategy. For our immediate interests, the most significant difference between the two is in how each views units (Lyman and O'Brien, 2002; O'Brien and Lyman, 2002b). Materialism—an unfortunate label to have to use here because of the existence in anthropology and archaeology of another "materialism" (e.g., Harris, 1979)—places no stock in real "kinds" of analytical units. We might create units—species, pottery types, and so on—in order to get analytical work done, but in materialism there is no natural "essence" that something exhibits and which forces us to put it in one unit versus another. Things often share properties in common, and if those properties are of analytical interest, then the empirical specimens are grouped together, but this is decidedly different than searching for natural groupings based on the presence of inherent, essential properties. Essentialism, however, *does* view reality this way—that is, the world is full of natural kinds, each of which has an essence (hence the name). Essential properties define an ideal, or archetype, to which objects are imperfect approximations—a view that renders nonessential variation between specimens as simply "annoying distraction" (Lewontin, 1974:5). Specimens grouped within natural kinds by definition always share essential properties regardless of where they are in space and time. Prediction is possible because the kinds are real and thus are always and everywhere of the same sort; they will therefore always interact in the same manner and the same result will be produced by their interaction. Thus, laws in a philosophical sense can be written (Simpson, 1963, 1970).

Ahistorical sciences, such as chemistry, employ an essentialist metaphysic; what they are measuring is *difference* among units as opposed to *change*, which is the replacement of one unit by another. Because only difference is capable of being measured, essentialism often is referred to as *typological thinking* (Mayr, 1959)—an apt description given that types are viewed as real. Biologist Ernst Mayr (1959:2) notes that because "there is no gradation between types, gradual evolution is basically a logical impossibility for the typologist. Evolution [change], if it occurs at all, has to proceed in steps or jumps." How could change be anything *but* transformational? If things have essences, the only way they could evolve is by dropping one essence and adopting another.

Materialism, however, holds that certain phenomena cannot exist as bounded, discrete entities because they are always in the process of becoming something else. With specific reference to organisms, Mayr (1959:2) points out that "All [things] are composed of unique features and can be described collectively only in statistical terms. Individuals . . . form populations of which we can determine an arithmetic mean and the statistics of variation. Averages are merely statistical abstractions, only the individuals of which the populations are composed have reality." As a direct result of its materialist metaphysic, a historical science can monitor *change* in phenomena: "For the [essentialist-thinking] typologist, the type is real and the variation an illusion, while for the [materialist-thinking] populationist the type (average) is an abstraction and only the variation is real" (Mayr, 1959:2). It is this variation between and among specimens that "is the cornerstone of [evolutionary] theory" (Lewontin, 1974:5). Note that the materialist perspective does not view *all* phenomena as constantly changing units. Biologists, for example, view organisms and their phenotypic features this way, but they readily admit that molecules, atoms, and subatomic particles fall on the essentialist side of the house.

Immanent and Configurational Properties

One criticism of evolutionary archaeology (e.g., Schiffer, 1996) has been its perceived failure to acknowledge the role analogy plays in science. Science, of whatever kind, is based on analogy, but there are different kinds of analogy. Evolutionary archaeologists have never denied the importance of analogy in science generally, nor in evolutionism specifically, but they *have* consistently maintained that each kind of analogy has its distinct role in scientific investigation (e.g., O'Brien et al., 1998). The differences among kinds of analogy often are subtle—a point made not only in the archaeological literature (e.g., Simms, 1992; Stahl, 1993) but also in the geological (e.g., Shea, 1982) and paleobiological (e.g., Gould, 1965) literature. We find paleobiologist George Gaylord Simpson's (1963, 1970) discussions helpful in this respect because he described, using different terms, the kinds of linkages between analogical reasoning and essentialism, as well as those between such reasoning and materialism:

> The unchanging properties of matter and energy [chemistry, mechanics, physics] and the likewise unchanging processes and principles arising therefrom are *immanent* in the material universe. They are nonhistorical, even though they occur and act in the course of history. The actual state of the universe or of any part of it at a given time, its configuration, is not immanent and is constantly changing. It is *contingent* . . . or *configurational*. . . . History may be defined as configurational change through time (Simpson, 1963:24–25).

Simpson's immanent properties and processes comprise, in our terms, essentialism; his configurational properties are historically contingent and comprise materialism. The dictum that "the present is the key to the past" holds only with respect to essentialist, or immanent, properties and processes: "What we know (or theorize) about the immanent characteristics of the universe is derived from observation of the present" (Simpson, 1970:81). Were it not for this simple fact, retrodiction and prediction would be impossible.

Immanent properties and processes allow us to make mechanical inferences (Wolverton and Lyman, 2000). The half life of ^{14}C is an immanent property that allows us to calculate radiocarbon dates; the validity of the radiocarbon-dating method hinges on analogical reasoning that the half life of ^{14}C is the same regardless of place or time. Similarly, processes that result in biological evolution—genetic transmission, mutation, drift, differential reproduction and survival, and selection—involve immanent properties and processes. When we duplicate the manufacture of a particular kind of early nineteenth-century pottery and then subject it to strength tests and the like to understand why a particular clay body was selected, we are using analogical reasoning based on immanent properties. This is why we have consistently applauded the technological work of people such as Michael Schiffer and his colleagues (e.g., Schiffer, 2004, 2005; Schiffer and Skibo, 1987, 1997; Schiffer et al., 1994; Skibo et al., 1989; Vaz Pinto et al., 1987), who, although they would describe themselves as behavioral archaeologists as opposed to evolutionary archaeologists, have made significant strides in understanding the nature of immanent properties of artifacts.

The history of an evolutionary lineage is, however, configurational. Every fossil has "its particular as well as its general configurational properties, its significant balance of difference and resemblance [to other fossils], not only because of immanent properties of its constituents and immanent processes that had acted on it, but also because of its history, the configurational sequence by which these individual things arose" (Simpson, 1963:27). Thus, "[h]istorical events, whether in the history of the earth, the history of life, or recorded human history, are determined by immanent characteristics of the universe [the source of laws] acting on and within particular configurations, and never by either the immanent or the configurational alone" (Simpson, 1963:29). It is the task of the evolutionist—whether studying fossils, fruit flies, or sherds from a nineteenth-century farmstead in New England—to keep immanent and configurational characteristics separate. We are *not* saying that evolutionists should ignore immanent properties; in fact, we argue just the opposite (O'Brien and Holland, 1990, 1995a; O'Brien et al., 1994; Wolverton and Lyman, 2000). Analogy, however, is useful only when immanent properties are involved.

It has been asserted (Boone and Smith, 1998:S154) that what we are advocating amounts to radical empiricism, which, if applied to evolutionary paleontology, would strip it "to its

(fossilized) bones." We assume this means that paleobiologists can discuss only the morphometry of the fossils they find rather than various details of the physiology and behavior of the organisms represented by those fossils. Granting the distinction between immanence and configuration, such an argument is not credible (Lyman and O'Brien, 1998). Bone as a tissue *must* have particular immanent (essentialist) properties and respond to stimuli in particular ways to be an efficient superstructure for the organism it supports; otherwise, the lineage ends. Functional anatomy tells us about physiology and behavior precisely because of those properties. Immanent properties of teeth will inform us as to whether those teeth belonged to a carnivore or herbivore. But whether a bone is from a monogamous or polygynous organism is a different question entirely—one that concerns configurational (historically contingent) properties and processes. We might be able to address this question through careful reference to historical context, but no matter how hard we examine that context, we might not be able to answer the question. Here again, historical archaeologists have a leg up on other investigators because of their access to historical context through documentary sources.

Kinds of Units

If, as materialism holds, only variation is real, how do we study it? The answer is, by constructing a set of units that allows properties, or attributes, of phenomena to be measured. Given that we can adequately control time, we can then stack those units—each of which is an encapsulation of what happened at a particular moment in time—and examine change among them. But we have to know exactly what it is we are measuring. Here we use the term *measurement* to denote the assignment of a symbol—letter, number, word—to an observation made on a phenomenon according to a set of rules. It is these rules, sometimes referred to as *systematics*, that in our minds set evolutionary archaeology apart from other approaches that deal with change in the material record. Evolutionism demands systematics that not only can track variation and do it in unvarying fashion time after time but can also be adapted for use at different scales. Most important, the measurement units used are selected to solve a particular problem (Lyman and O'Brien, 2002).

Archaeology has a long history of unit construction (O'Brien and Lyman, 2002b; Ramenofsky and Steffen, 1998), though it is clear that many of the units routinely employed—type, group, class, tradition, period, phase, and so on—are rarely defined explicitly. Most archaeologists have an intuitive feel for what certain units represent and thus bypass clear exposition of how they employ the units and what the units are signifying. This strategy cannot be applied in a situation where change as opposed to transformation is the subject of investigation. Depending on the scale at which we are operating, that change may be difficult or relatively easy to measure. Regardless, change must be measured as alterations in the frequencies of analytical (not real) kinds, or what we have termed *ideational* units (Dunnell, 1986; Lyman et al., 1997; O'Brien and Lyman, 2000).

Our preferred system of unit construction is paradigmatic classification (Dunnell, 1971; Lyman and O'Brien, 2002; O'Brien and Lyman, 2000, 2003a) because we believe it offers the only systematic means of tracking variation at various scales. In paradigmatic classification, the analyst selects dimensions—variables—relevant to some problem—for example, color and kind of edge design on English-made pottery—and it is the attributes of those dimensions—for example, blue and green or raised and nonraised—that result in the sorting of specimens into internally homogeneous, externally heterogeneous piles. These definitional units are termed *classes*. Using our simple two-dimensional example above, four classes of pottery exist: blue/raised edge, green/raised edge, blue/nonraised edge, and green/nonraised edge. Specimens that share attributes (properties)—those that end up together in one of the analyst's piles—are grouped together because they hold in common some number of attributes *selected* by the analyst for use in a specific piece of work, not because of any essence that *makes* them similar. Importantly, there will be myriad features exhibited by the specimens that are not used in the classification because they are not of immediate analytical interest. The resulting analytical units are ideational, meaning that they are not

real in the sense that they can be seen or picked up and held. The things in the units—for example, vessels with green, raised-edge decoration—*are* real, and we refer to them as empirical units.

These are significant differences between paradigmatic classification and other systems of categorization. Think of the tripartite subdivision of English-made pottery with which many historical archaeologists are familiar. At one level we would agree that when someone uses the terms *creamware, pearlware,* and *whiteware,* we have a pretty good idea of what he or she is talking about. Thus those terms serve a purpose, if none other than as shorthand encapsulations of information relative to such things as manufacture and time. But are they the kinds of units that are useful for tracking evolutionary change? They probably are not. All along the pottery-manufacturing continuum were thousands of changes in paste, glaze, firing temperature, and so on, and all we have done is select some convenient and rather visible points at which to make slices. Creamware, pearlware, and whiteware have often assumed a life of their own, or at least that is the way they are referred to in print. But they are *not* empirical units; rather, they are large, cumbersome ideational units used to slice up the pottery continuum. But they *are* ideational units. One might argue that pearlware is real[1] because Josiah Wedgwood set out in the 1770s deliberately to create a whiter-bodied pottery, but this misses the point. No one would suggest that behavior is not an important selective agent in nature, but behaviors, regardless of whether they are intentional, create *things*; they do not create *categories*. In other words, behaviors create pearlware bowls, not pearlware.

Pottery is not the only set of materials amenable to paradigmatic classification. Take, for instance, residential structures. The need to classify structures is not new in either historical archaeology or historical geography. Fred Kniffen (1965:550), for example, saw a need to construct a typology that would categorize the wide assortment of structural forms he observed throughout the eastern and southeastern United States: "To make the most of the opportunity it was deemed necessary to set up concurrently a typology quantified as to numerical importance and qualified as to areal and temporal positions, and to seek out origins, routes of diffusion, adaptations, and other processes affecting change or stability." These goals have a definite evolutionistic ring to them. Kniffen's goals were realized in a system used to classify early nineteenth-century residential structures in northeastern Missouri (O'Brien and Lewarch, 1984; O'Brien et al., 1980). We simplify the system, which originally used 31 dimensions, for use as an example here. Let us say we are interested in four dimensions of variation: (1) construction material, (2) number of stories, (3) number of rooms downstairs, and (4) roof type. Each dimension has a number of attributes attached to it, the actual number used being a product of the amount of variation we identify as analytically important:

Dimension 1: Construction Material
Attribute states: 1. Log
2. Heavy timber
3. Light timber
Dimension 2: Number of Stories
Attribute states: 1. One story
2. Two stories
3. Three stories
Dimension 3: Number of Rooms Downstairs
Attribute states: 1. One room
2. Two rooms
3. Three rooms
Dimension 4: Roof Type
Attribute states: 1. Gable
2. Gable and cross gable

Based on this four-dimensional example, 54 classes are possible, each comprising four attributes. For example, there is a log, two-story house with two rooms downstairs and a gable roof (1221). Similarly, there is a log, one-story house with two rooms downstairs and a gable roof (1121). The advantage of paradigmatic classification is that it

[1] Interestingly, Wedgwood considered the addition of cobalt oxide to the glaze to be a *change in* rather than an *improvement over* what his firm had been producing (Finer and Savage, 1965:237). Towner (1957:3–4) downplays the significance of pearlware, noting that it should be classified simply as a creamware variant. The important point here is not the terminology but the recognition that there was no grand disjunction between creamware and pearlware. Rather, selection against a cream-colored body led to the evolution of vessels that were whiter in color. That evolutionary line continued back through creamware, which, as Towner (1957:1) points out, was itself the direct descendant of lead-glazed wares of the Middle Ages.

can be applied consistently. Each dimension can be analyzed separately or in concert with different combinations of other dimensions to determine the most analytically useful combination for any specific set of objects. Decisions about the relative importance of various attributes or dimensions can be based on inspection of the frequency of each attribute or various combinations of attributes rather than on preliminary inspection of the sample.

Paradigmatic classification tells us a lot more about variation, say, in early nineteenth-century structures than simply lumping them in descriptive types such as "log cabins," "frame houses," and the like—the point Kniffen (1965) was making when he called for a systematic procedure of categorization. Look at some of the variation noted in the sample of houses from northeastern Missouri. Figure 1 illustrates the facades and floor plans of classes of one-story, single-pen houses and story-and-a-half, single-pen houses; and Fig. 2 illustrates the facades and floor plans of classes of one-story, double-pen houses. One can immediately see that there is

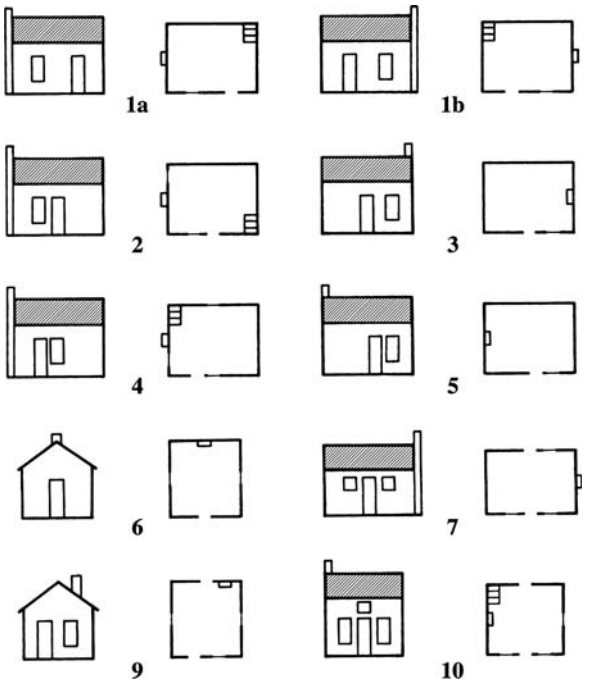

Fig. 1 Facades and floor plans of classes of one-story, single-pen houses and story-and-a half, single-pen houses created by paradigmatic classification of structures in the central Salt River valley of northeastern Missouri (after O'Brien et al., 1980; from O'Brien and Lyman, 2000:Fig. 1)

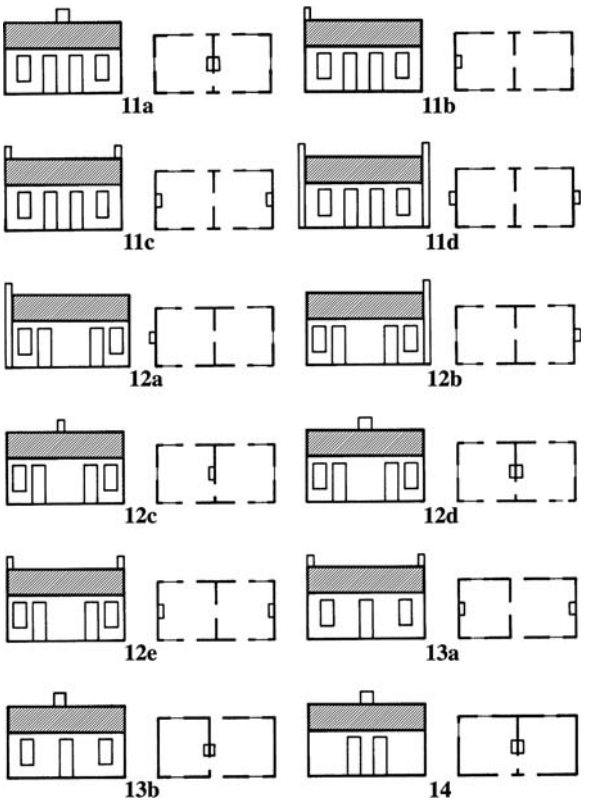

Fig. 2 Facades and floor plans of classes of one-story, double-pen houses created by paradigmatic classification of structures in the central Salt River valley of northeastern Missouri (after O'Brien et al., 1980; from O'Brien and Lyman, 2000:Fig. 2)

considerable variation among the classes—variation that is overlooked in most standard typologies of residential structures. Of course, classification in and of itself tells us nothing about why the variation exists in the first place, nor does it answer the question of why we chose to classify things one way as opposed to another. At a superficial level, we know why variation exists in house form: human intentionality and inventiveness. No one, certainly not an evolutionist, would disagree with this statement, but neither would he or she find it particularly enlightening. We *know* that residential structures are intentional products; they did not come into existence miraculously. But intent is a proximate cause of something, not the ultimate cause (Mayr, 1961), and we find it lacking as an adequate explanation for why lineages of artifacts, including houses, take the forms they do. Rather than

focusing on intent, which we find impossible to deal with archaeologically, we focus on mechanisms—such as selection and drift. The former works on features that are functional—selection affects the differential persistence of features that contribute to the fitness of organisms—whereas the latter, drift, affects the differential persistence of features that do not contribute to an organism's fitness. As we discuss a bit later, our paradigmatic classification of early nineteenth-century houses might provide the units necessary to study these evolutionary processes.

Change, Homology, and Lineages

If two things are similar but also somewhat different in form and also different in age, do they indicate that change has taken place? For example, if we chronologically align a sample of houses, does this ordering represent change? From a modern Darwinian viewpoint, change is represented *only* if two things are phylogenetically related, in which case the similarity of form and difference in age signifies inheritance and thus continuity—an ancestor-descendant lineage. If we cannot establish heritability—that two things are related by ancestry—we cannot be sure that we are not dealing simply with a historical relationship. That is, object B may follow object A in time, but such a historical relationship in no way ensures that there is a hereditarily based link between the two. It is establishing this link that is important in an evolutionistic study. How does one demonstrate a phyletic relation—that two phenomena are parts of a lineage? Paleobiologists accomplish this task by identifying homologous traits, or attributes, in the two phenomena (Lyman, 2001). If they share one or more such traits, they are by definition phyletically related. This oversimplifies matters in one important way: Not all homologous traits are used to construct hereditary relationships. Once analogous traits are separated from homologous traits—not always an easy exercise (see below)—homologous traits are subdivided into two kinds—shared ancestral (or primitive) traits and shared derived traits. It is only the latter that are used to build what are known as phylogenetic histories.

All mammals have a vertebral column, as do some animals placed in other categories, such as most fishes. The presence of vertebrae is one criterion we use to place organisms in the subphylum Vertebrata. The vertebral column is a homologous character shared by mammals and fishes, but it is a character that goes so far back in time as to be essentially meaningless in terms of helping us understand how the myriad backboned organisms of the last 400 million years are related phylogenetically. Thus, we use other characters—such as the presence or absence of hair or a four-chambered heart—to segregate mammals from other classes of organisms that have backbones. This segregation, or cut, takes us back to about 200 million years ago. Then we make another cut based on the presence/absence of other characters to subdivide the sample further, then another cut, and another, and so on. We use shared derived characters (termed *synapomorphies*) to do this; shared ancestral characters (*symplesiomorphies*) are not considered. The latter characters—such as the vertebral column—are indeed homologous, but they do not help in the construction of phylogenies precisely because they are shared by all members of all the groups of Vertebrata.

Identifying homologous traits in general is a significant analytical hurdle (e.g., Fisher, 1994; Smith, 1994; Szalay and Bock, 1991) because a trait that is shared by two phenomena may be analogous, meaning that it is the result of evolutionary convergence. Anthropologists have long been interested in the problem of separating analogs from homologs. A.L. Kroeber (1931:151) points out that the "fundamentally different evidential value of homologous and analogous similarities for determination of historical relationship, that is, genuine systematic or genetic relationship, has long been an axiom in biological science. The distinction has been much less clearly made in anthropology, and rarely explicitly, but holds with equal force." He went on to imply that a "true homology" denoted "genetic unity." In terms of how to separate homologs from analogs, Kroeber (1931:151) suggests that "where similarities are specific and structural and not merely superficial . . . has long been the accepted method in evolutionary and systematic biology." He was correct, for this was, and is, the reasoning used by biologists (e.g., Szalay and Bock, 1991). The wings of eagles and those of crows are structurally as well as superficially similar; this is homologous similarity. The wings of eagles and those of bats are superficially, but not

structurally, similar; this is analogous similarity. Kroeber (1931:152–153) cautions, however, that:

> There are cases in which it is not a simple matter to decide whether the totality of traits points to a true [homologous] relationship or to secondary [analogous, functional] convergence. . . . Yet few biologists would doubt that sufficiently intensive analysis of structure will ultimately solve such problems of descent. . . . There seems no reason why on the whole the same cautious optimism should not prevail in the field of culture; why homologies should not be positively distinguishable from analogies when analysis of the whole of the phenomena in question has become truly intensive.

Despite his insights, Kroeber had a difficult time translating his proposal into practice, undoubtedly a result of perceived fundamental differences between biological and cultural evolution.

Evolutionary archaeologists have dedicated considerable energy to differentiating between homologous and analogous traits, usually referring to the former as stylistic traits and the latter as functional traits (e.g., Dunnell, 1978; Hurt and Rakita, 2001; Lyman, 2001; O'Brien and Holland, 1990, 1992; Teltser, 1995). Some archaeologists view the difference between the two kinds of traits as a continuum, but we view it as a dichotomy (O'Brien and Lyman, 2000). We expect stylistic traits to behave differently than functional ones, given that the latter are by definition those shaped by selection and as such directly affect the fitness of the populations in which they occur (Dunnell, 1978; O'Brien and Holland, 1992). Stylistic traits are not subject to selection and thus their distribution over time and space are different than the distribution of functional traits (Allen, 1996). In greatly simplified terms, we expect traits under selection to behave more or less as shown in Fig. 3: They begin life with a low relative frequency within a population, but at some point they come under selective control and increase dramatically in frequency until they become fixed within the population. Then at some point they decline rapidly in frequency as some similar but alternative feature is selected for.[2] In contrast, stylistic, or "neutral," features drift along, either increasing or decreasing in relative frequency stochastically.

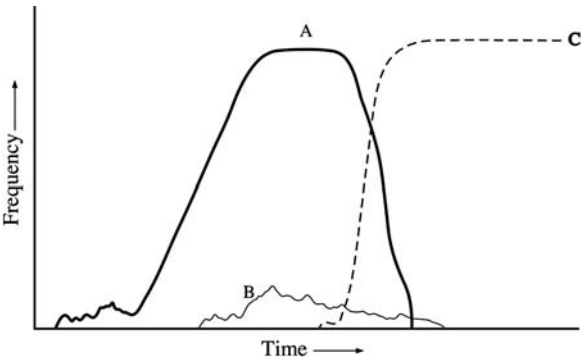

Fig. 3 Hypothetical changes in frequency of traits under selection versus traits under drift. Trait A appeared, then drifted along in the population and eventually came under selective control, leading to a rapid increase in expression. Eventually it became selected against and rapidly disappeared. Trait B never came under selective control but rather drifted through time, eventually disappearing. Trait C was also selected for, but much more quickly than was Trait A. Also, its rise to fixation within the population (the point at which the curve levels off) was more rapid than the rise of Trait A, signified by the steeper curve for Trait C (from O'Brien and Lyman, 2000:Fig. 3)

We noted earlier that perhaps the units created from our paradigmatic classification of houses might give us some clues as to the role played by selection and drift on the evolutionary landscape of a portion of the midwestern United States during the early nineteenth century. House form is conditioned by a host of factors that operate at several levels of specificity, including style and function. Here, functional features refer to architectural attributes that aid, condition, or in some way relate to activities performed within or adjacent to a structure. Facade structure, especially the order of window and door placement, is usually considered part of architectural "style," but this is colloquial usage. The placement of windows and doors is probably functional. Entry placement conditions traffic flow, access, and ventilation, while window location and frequency affect available light, ventilation, and heat loss in the winter. Similarly, a second story might be considered casually as a stylistic feature, yet its construction is conditioned to some degree by economic factors, family size, control of technology, and possibly kinship ties. Numerous other features are likely also functional, including

[2] Although we use the term "selected for," no feature is really selected "for." Rather, one state of a feature is selected against, which causes an alternative state of that feature to rise in relatively frequency.

construction material and placement of chimneys. Certainly decisions about whether to place chimneys on the inside or outside of a house have to do with function. We might propose, for example, that interior chimneys, because of their ability to radiate more heat inward, would be found more frequently in northerly latitudes, whereas exterior chimneys, because of their ability to radiate more heat to the exterior, would be found more frequently in southerly latitudes.

As a first approximation, we might propose that such features as exterior trim, door moldings, and the like are nonfunctional, or stylistic, features. They play no part in the function of a house and hence have no affect on the direct fitness of the inhabitants. This seems like a reasonable proposition, but it might be wrong. What if certain features are important displays of wealth, or of apparent wealth (e.g., Neiman, 1999)? The fact that one does *not* exhibit those features certainly could affect one's fitness. So maybe the size and shape of seemingly insignificant things such as door moldings *are* functional. There is a subtle shift in scale here, and it is one that has only been alluded to by evolutionary archaeologists (e.g., O'Brien and Holland, 1990): The presence of a trait might be functional, but the states of the trait might be neutral. As long as the rooms in a house have large, ornate door moldings, it does not matter whether the molding is scalloped, double-ridged, or decorated in some other fashion. The only thing that is important from the standpoint of fitness is the presence (or absence) of ornate door moldings; there is a range of acceptable attribute states. Hence we say that the attribute states are neutral, meaning that selection does not work on them. Rather, it works at the level of the feature itself.

If we had a large enough sample of houses and had tight chronological control over them, we should be able to plot the distribution of features in a way similar to what is shown in Fig. 3 and figure out which ones were under selective control and which ones were not. In making inferences about function, it is likely that we will imply far more overt, conscious decisions about use of space and adaptation to the environment than were actually recognized by the builders, but this is irrelevant. Selection is blind to the source of variation presented to it.

If evolutionism focuses on change and heritability, then we want our sample to represent some kind of lineage. We would not, for example, want to throw in houses from unconnected time periods and geographic regions because we would have no control over how the empirical objects in the sample were related. We probably could never hope to distinguish between homologous and analogous features. In the case of the structures from northeastern Missouri used in the paradigmatic classification, there exists a battery of documentary evidence that allows us to examine relationships among families that built the structures. Most families came from the Bluegrass region of Kentucky and either were related by blood or marriage before they came or intermarried after arrival in Missouri. These interconnected units shared numerous similarities, including ownership of slaves and an agricultural base centered around tobacco and hemp—a socioeconomic pattern sometimes referred to as "Upper South" (Mitchell, 1972, 1978). We can label this pattern a "tradition" in the usual sense that it is used in archaeology. But what if we did not have such detailed documentary evidence? How could we get at homologous similarity and heritable continuity in the archaeological record? One way is through the use of seriation.

Seriation

Seriation has its conceptual roots in the comparative method of linguists working in the late eighteenth and early nineteenth centuries (Leaf, 1979:86–90), and was used for the first time in archaeology in the mid-nineteenth century (Evans, 1850). We distinguish among three techniques of seriation on the basis of the kinds of units they employ, how those units are used (Lyman et al., 1998), and the resulting manner in which time is measured (O'Brien and Lyman, 1999). The first is *phyletic seriation*, which had its proximal roots in the biological notion of anagenesis, or a single-line evolutionary sequence. Thus archaeologists who performed phyletic seriations (e.g., Kidder, 1917) spoke of one kind of artifact "developing" or "evolving" into another or "fathering" another and of kinds of artifacts going "extinct" (see more examples in Lipo et al., 2006b; Lyman and O'Brien, 2006). Phyletic seriation uses

empirical units, or specimens, which are sorted to reflect a character gradient. If the character shifts states over time, the gradient so denoted comprises what is called a *chronocline*. The use of empirical units results in time being measured discontinuously because boundaries are drawn between chunks of the character gradient. Each chunk is viewed as a unit that occupies a particular and unique position in the temporo-spatial continuum. An example of a phyletic seriation built on changes in New England headstones is shown in Fig. 4.

What does such a diagram tell us? For one thing, it tells us that on the face of it there appears to be a progression from a fairly complex design to a simplified one. In this particular example, we have the very careful work of James Deetz and Edwin Dethlefsen (1965, 1971; Dethlefsen and Deetz, 1966) to assist us in constructing the phyletic sequence. We know the sequence is correct because the gravestones had dates on them, and in some cases Deetz and Dethlefsen had documentary information that allowed them to pinpoint not only who

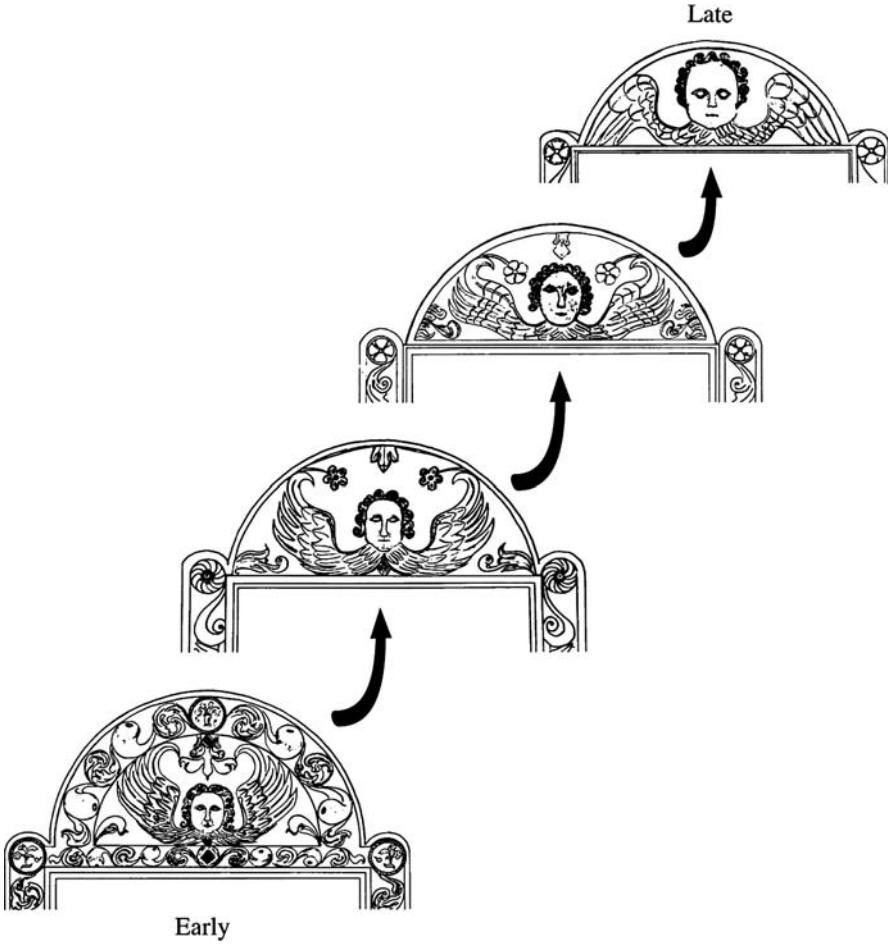

Fig. 4 A phyletic seriation of gravestones from a cemetery in Charlesdown, Massachusetts, showing reduction in cherubhead design complexity between 1720 and 1760. The actual sequence was based on headstones of known date, but it illustrates the technique of arranging groups of specimens based on a proposed evolutionary sequence, here a design sequence (after Dethlefsen and Deetz, 1966). The gravestones came from a single graveyard, thus meeting one of the criteria of the seriation model—that what is being measured is variation in time rather than variation in space. Deetz and Dethlefsen (1965) explore this important issue relative to New England headstones, pointing out the effect of distance on the appearance and disappearance of various headstone designs (from O'Brien and Lyman, 2000:Fig. 4)

carved a headstone but also when it was carved as opposed to when it was used, which could have been considerably after the stone was carved. But the point is that we could have constructed a sequence of headstones even had they not exhibited dates. We would base the sequence on suspected changes in what was being presented in terms of design and how the designs changed through time. A.V. Kidder (1917) did this with his prehistoric pottery from Pecos, New Mexico, and John Evans (1850) did it with British gold coins from pre-Roman Age and Roman Age Britain. Even if we got the sequence correct, all we would have is a historical sequence; there would be no assurance that the sequence exhibited heritable continuity. It *probably* does, but there is no guarantee that there are no gaps or discontinuities of greater or lesser magnitude in the sequence. This is so because the units arranged in a phyletic seriation are seldom defined explicitly in terms of the attributes of which they are composed and that might track heritable continuity. If such changes are not closely monitored via detailed classifications, then explanation of the perceived changes in terms of heritable continuity is difficult to warrant.

There are two other techniques for tracing heritable continuity. These are *occurrence seriation* and *frequency seriation*. Both occurrence seriation and frequency seriation are distinct from phyletic seriation because they measure similarity—and thus time—in a distinct way that reveals heritable continuity. Occurrence seriation and frequency seriation begin with theoretical units (TUs)—not empirical units (the actual objects)—each of which has a temporal distribution displayed by the empirical specimens it contains (Lyman and O'Brien, 2000, 2005, 2006). Each TU is explicitly defined at the start of analysis, and then specimens in collections are identified as a member of one TU or another based on the definitive attributes of the TUs. The definitive attributes are not extracted from the specimens on the basis of observation, but rather are imposed on the specimens in order to sort the specimens into groups, with the members of each group displaying the particular combination of definitive attributes of only one TU. The TUs are tightly defined beforehand so as to preclude confusion over categorization of a specimen. Units constructed in such a manner are referred to as *historical types* (Rouse, 1939). The trial-and-error process of constructing historical (temporal) TUs (types) in archaeology is rarely explicit (see Lyman and Harpole [2002] for review of a rare early example). Early on, archaeologists learned rather quickly that decorative attributes, such as the designs painted on pottery, worked well for constructing temporal types, but why those sorts of attributes rather than others should prove useful was not understood (Lyman et al., 1997; Neiman, 1995; Teltser, 1995).

Both occurrence seriation and frequency seriation measure the similarity of collections of artifacts on the basis of shared TUs; these are referred to as "overlapping" types (e.g., Ford, 1938; Kidder, 1924; see O'Brien and Lyman, 1998). Types that overlap are, theoretically, shared as a result of heritable continuity between collections. Occurrence seriation assumes that a historical TU will have a single, continuous distribution over time. After specimens have been identified as members of particular TUs, occurrence seriation is used to order collections such that each TU displays this continuous distribution. Units might or might not be precisely contemporaneous with one another; ideally, they will not be, which is to say that each TU will display a more or less unique temporal distribution, yet each will overlap at least partially with at least one other TU (Fig. 5). Thus the more TUs shared by two collections, the less chance there will be that multiple collections will share a particular subset of TUs and thereby occupy the same position in the ordering. Figure 5 shows an unordered set of collections at the top and an ordered set at the bottom. In this example, the set shown at the bottom is in fact the only solution to the ordering; only that ordering meets the criterion that TUs have a single, continuous distribution over time.

Frequency seriation also assumes that a historical TU will have a single, continuous distribution over time, but it assumes further that the relative frequencies of specimens within each TU will fluctuate unimodally over time. Frequency seriation involves (a) identifying each specimen as belonging to a particular TU, (b) calculating the relative frequency of each TU within each collection, and then (c) ordering collections until each TU displays a continuous, unimodal frequency distribution like that shown in Fig. 6. Here we use the same TUs as

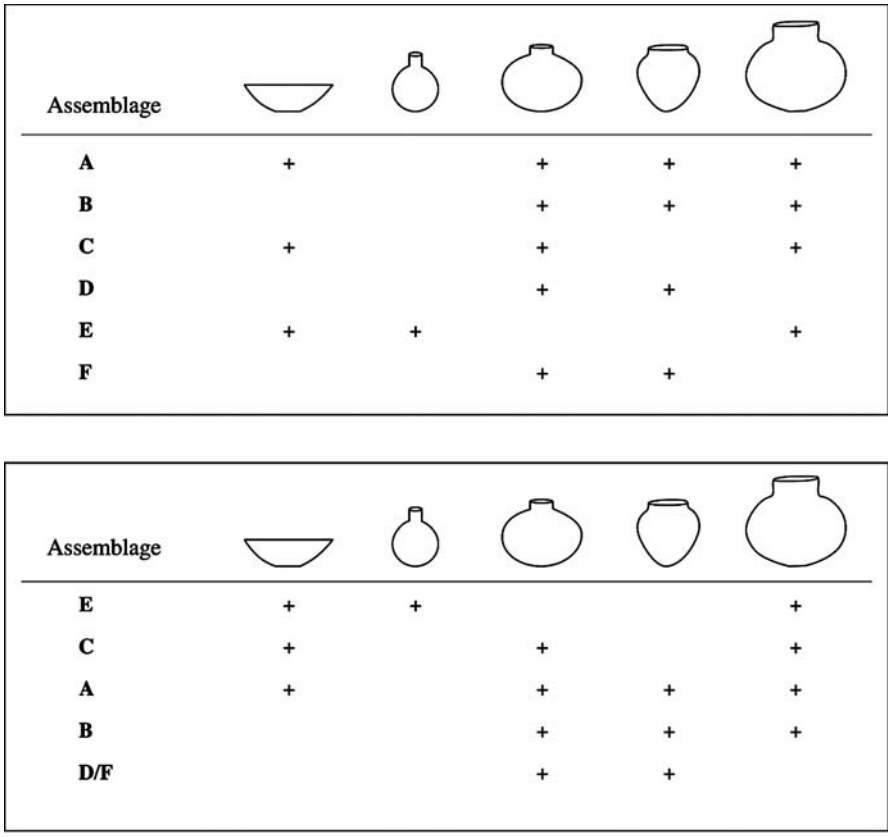

Fig. 5 An occurrence seriation of six collections using five artifact types. The upper portion of the figure shows the unordered collections. The procedure is to sort the collections (*rows*) such that each artifact type (each *column*) displays a continuous occurrence, signified by the "+" sign. The order resulting from meeting the expectations of the seriation model is given in the lower portion of the figure. Note that it makes no difference if the ordering from top to bottom is "E, C, A, B, D/F" or "D/F, B, A, C, E," because the direction of time's arrow is unknown. That knowledge must come from other data independent of the seriation, such as knowing that Types 1 and 2 occur late in time and Types 3 and 4 occur early in time, based on associated radiocarbon dates, stratigraphic excavation, or documentary evidence. Note also that Collections D and F are identical in terms of the types they contain. They cannot be sorted and in this example must be considered contemporaneous (from O'Brien and Lyman, 2000:Fig. 5)

in Fig. 5, but instead of plotting presence/absence we plot the relative frequencies of TUs in each collection (represented by the bars). Note that although we do not have complete histories for all TUs (which in this example are vessel forms), meaning that some of the series are missing bottoms or tops, they all display continuous, unimodal frequency distributions. Note also that frequency seriation allows us to separate collections D and F, which we could not do using occurrence seriation.

Another example of frequency seriation, one that will be familiar to historical archaeologists, is shown in Fig. 7, which plots J.C. Harrington's (1954) data on pipe-stem diameter. Harrington was looking for a means of dating pipes found on historical-period sites, and he found one in the diameter of the stem bore, which consistently narrowed from about 1620 to 1800. Figure 7 shows Harrington's data plotted by TUs, shown as bore-diameter classes. Notice the overlap of TUs through time, beginning with the earliest TU, 9/64-inch diameter, up through the latest TU, 4/64-inch diameter. The neatness of the solution—in terms of both overlap and unimodal distributions—indicates that we are dealing with not only a historical sequence but also one based on heredity. The sequence shows heritable continuity. We are not referring to genetic inheritance, but to inheritance that is intergenerational and intragenerational

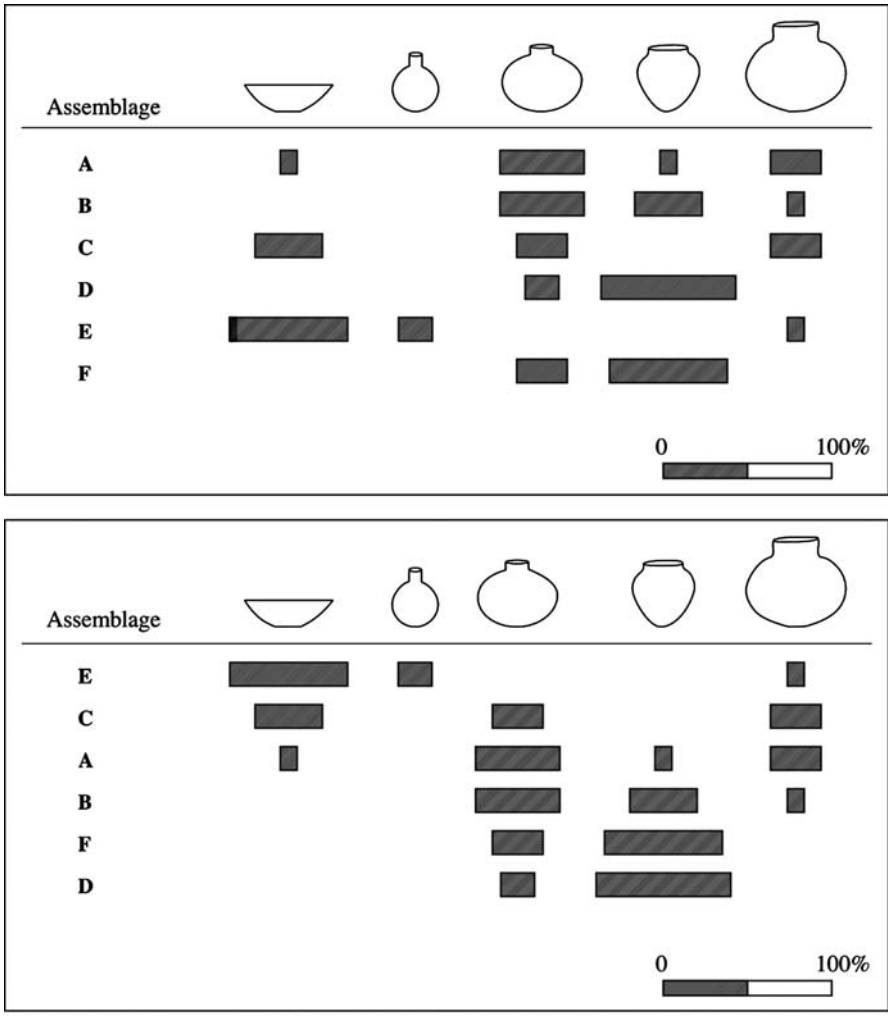

Fig. 6 A frequency seriation of the same collections is shown in Fig. 5. Again, the upper portion of the figure shows the unordered collections. The procedure is to sort the collections (*rows*) such that each artifact type (each *column*) displays a continuous and unimodal distribution in terms of the relative contribution it makes to each collection. The order resulting from meeting the expectations of the seriation model is given in the lower portion of the figure. Again, note that it makes no difference if the ordering from top to bottom is "E, C, A, B, F, D" or "D, F, B, A, C, E," because the direction of time's arrow is unknown. Note that Collections D and F can now be sorted, whereas in Fig. 5 they must be considered contemporaneous (from O'Brien and Lyman, 2000:Fig. 6)

transmission of styles among pipe makers. This is what we refer to later as the "tradition/lineage" sense of heritable continuity.

Prior to Harrington's (1954) analysis there was another means of dating pipes—using stem length—but there was a problem with this technique. Historical archaeologists noted that although the stem length of pipes changed through time, starting with 6–8-inch pipes in the early seventeenth century and progressing through ever-longer pipes, the trend reversed itself in the eighteenth century. Thus a pipestem of a certain length could date to either of two periods. TUs created on stem length would thus not be historical types because they would not yield continuous, unimodal frequency distributions.

Occurrence seriation and frequency seriation have three procedural requirements (Dunnell, 1970; Lipo et al., 1997; Teltser, 1995). In our view,

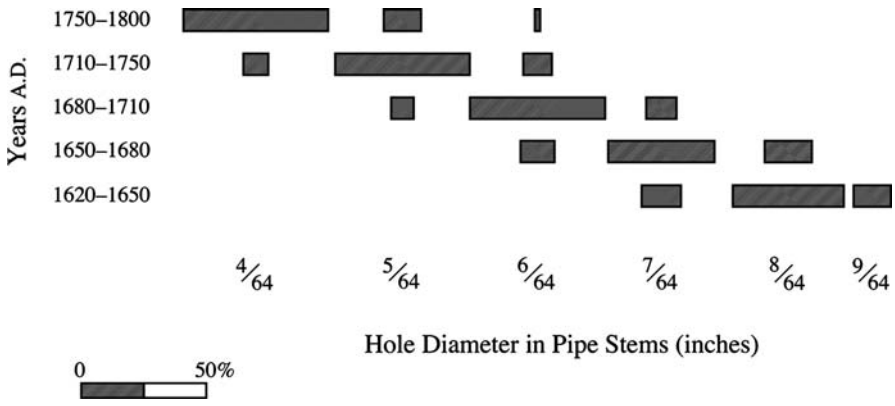

Fig. 7 A frequency seriation of classes of hole diameter in historical-period pipe stems based on data generated by Harrington (1954) (from O'Brien and Lyman, 2000:Fig. 7)

these requirements must also be met by phyletic seriation; in the following, substitution of the word artifact(s) for collection(s) recasts the requirements as applicable to phyletic seriation. The first requirement is that the collections to be seriated must be of similar duration. Meeting this requirement ensures that the placement of particular collections in an ordering is the result of age and not of duration. The second requirement is that all collections must come from the same local area. Meeting this requirement ensures that what is being measured is variation in time rather than variation in space. The second requirement explicitly attends the fact that transmission and heritable continuity have not only a temporal component, but also a spatial one (Dunnell, 1981; Lipo et al., 1997). If one wants to use seriation to measure transmission over time, then space must be controlled (its included amount must be limited); if one wants to measure transmission over space, then time must be controlled.

Given that the probability of transmission between entities increases as geographic proximity increases, meeting the second requirement increases the probability of meeting the third, which is that the collections must all belong to the same cultural tradition—defined as "a (primarily) temporal continuity represented by persistent configurations in single technologies or other systems of related forms" (Willey and Phillips, 1958:37). Implicit in this standard definition is the notion that persistence reflects cultural transmission or inheritance. Metaphorically, the seriated collections "must be 'genetically' related" (Dunnell, 1970:311; Kidder, 1916:267)—they represent an evolutionary lineage. If one meets the third requirement, then heritable continuity is assured, and phylogenetic affinities between the seriated collections are guaranteed. The key question is, how is the third requirement met? The answer is, by using theoretical units. Why? Because "similarity" is measured not as empirical units that *resemble* one another to greater or lesser degrees, such as in a character gradient represented by a phyletic seriation, but as *changes* either in the presence/absence of TUs variously held in common by distinct collections or in the frequencies of those variously shared TUs. Variation is measured with a set of analytically discrete variants rendered as distinct TUs, and time is measured continuously by the overlapping of TUs shared by collections (see Figs. 5, 6, and 7). Thus the definition of evolution as changes in variants (their presence/absence and/or their frequencies) over time is *explicitly* incorporated into occurrence and frequency seriation, and time is measured continuously.

Frequency seriation and occurrence seriation monitor transmission and heritability at two levels (Rouse, 1939). First, each artifact identified as a member of a particular TU is hypothetically related phylogenetically to every other specimen within that TU, given that they share in common the definitive attributes of the TU. The perfect correspondence of attributes displayed by specimens identified as members of a particular TU enhances the probability that they are members of the same lineage; the more character states or attributes defining a TU, the greater the chances are that homologous structures are included. We refer to this as the *type/species* sense of heritable continuity (O'Brien and Lyman, 2000). Second, the multiple TUs that are seriated are also hypothetically related

phylogenetically, given the requirement that all seriated collections derive from a single cultural tradition. Traditions—just as TUs—can be conceived of and constructed at the scale of attribute of a discrete object, type of discrete object (a particular combination of attributes), or multiple types of discrete objects (Neff, 1992). Thus, in our paradigmatic classification of houses (see Figs. 1 and 2), we can track discrete houses or any attribute of any dimension. We refer to this as the *tradition/lineage* sense of heritable continuity to signify the potential for a diversity of units—of whatever scale—within a tradition or lineage. The phylogenetic implications of the hierarchical structure of the Linnaean taxonomy in biology are transferable to a similar hierarchical alignment of artifacts. Thus, "pottery" could be aligned with a biological family, "types" of pottery with biological genera, and "varieties" of pottery with biological species. TUs of pottery can be seriated *if* they comprise a pottery tradition (in biological terms, a monophyletic group, or clade).

In the preceding paragraph we emphasized that heritable continuity in both the type/species sense and in the tradition/lineage sense is *hypothetical*. This means that the phylogenetic relationships of the seriated materials must be tested. The actual ordering of a set of materials using frequency seriation comprises the test, because *if* the requirements of seriation are met, and *if* the TUs are related in both the type/species sense and the tradition/lineage sense, then the frequency distribution of each TU over time will display a unimodal curve as a result of transmission (Lipo et al., 1997; Neiman, 1995; Raup et al., 1973). The use of TUs to classify artifacts ensures heritable continuity at the type/species level—items are definitionally identical—and, with appropriate specification of the set of TUs used, at the tradition/lineage level, as well.

Discussion

If one has followed what has been said to this point, he or she has acquired an understanding not only of the basic tenets of evolutionary archaeology but also of some of the techniques that are useful for examining change over time within an evolutionary framework. Perhaps at this point two thoughts come to the reader's mind: "I follow the arguments, but I don't see them as the intellectual property solely of evolutionists"; and "I don't see where the 'evolution' is in all this." In response to the first point, individual elements of what we have discussed to this point are *not* the purview solely of evolutionists. Scientists other than evolutionists, for example, make the distinction between materialism and essentialism, and they also study change. Because of what they study—organisms—evolutionists are restricted to one view of reality (materialism) and one way of measuring change (as replacement of units). Making their job more difficult is the fact that populations of their empirical units—the actual things they study—are always changing via turnover in membership. This change goes on second by second, hour by hour, year by year, and so on. The problem is that things do not stand still long enough for us to get a good fix on them. Just about the time we think we've taken the measure of something, it has been replaced by something else. We would never argue that a chemist or physicist has an easy job of it, but at least some of the things they study—subatomic particles, atoms, compounds, and the like—do not change. That's why we say that in essentialist science, time and space merge. It doesn't matter, for example, when or where an atom of hydrogen exists; it will be hydrogen today, tomorrow, on Earth or Jupiter. Thus essentialism allows laws to be derived that not only describe the actions of empirical units, but also allow us to predict their future behavior. Time and space, however, cannot merge under a materialist framework because the empirical units—organisms—*do* have unique time–space positions. Prediction is precluded, as are most laws. The only law that applies to materialist phenomena is the law of contingency—whatever happens at, say, point D is conditioned by what happened previously at points C, B, and A. This is what makes evolutionism a historical science. It is the careful construction of that history that is of utmost importance in any evolutionistic study.

Evolutionists have a unified perspective on reality, variation, and how to measure that variation. They do not agree on all aspects of evolution or on how to study it (O'Brien and Lyman, 2000), but most points of contention are relatively minor

compared to the degree of consensus that exists in Darwinism. Evolutionists share pieces of their perspective with nonmaterialists, but if we take a careful look at several disciplines where evolution has long been of analytical interest, and this includes anthropology and its subfield archaeology, we will see that most perspectives on the subject are non-Darwinian. It is the collection of particular methods, techniques, epistemology, and ontology that makes Darwinism unique.

In response to the second point raised by our imaginary reader—"Where's the evolution in all this?"—we note that this question is one that evolutionary archaeologists hear constantly (e.g., Bamforth, 2002; Boone and Smith, 1998). Part of the reason for the frequency with which it is asked is attributable to a lack of familiarity with Darwinism on the part of the questioner (e.g., Bamforth, 2002; see O'Brien and Lyman, 2002a; O'Brien et al., 2003). Misconceptions about what evolution is and how it works also stem from how it normally is presented in the popular literature: as some large-scale change that causes something eventually to become something else. Evolution is typically presented as large-scale change that takes place over a long period of time. These presentations, of course, are correct, but they are only part of the story; by focusing on them exclusively, one's impression is biased from the start. What is missing is the fact that the large-scale evolutionary results that we see so plainly are the cumulative products of countless smaller-scale, and hence much less evident, changes that occur continually.

Most of us have no problem with the concept of hominid evolution—the fact that some 7–9 million years ago the line that led to chimps and humans diverged from the line that eventually led to gorillas. Similarly, some 6 million years ago, the line that produced chimpanzees diverged from the hominid line that produced, among other creatures, australopithecines and eventually members of the genus *Homo*. When we line fossils up in a certain way, they make sense from the standpoint of morphological characteristics—that is, we can see the profound changes that hominids have gone through during the last 5–6 million years. What else but evolution could have caused such large-scale change? The answer is, nothing *but* evolution could have caused it. But what about change over the last 100,000 years? Can we see enough morphological change over that span to indicate evolution has taken place? In some cases we can, or at least our taxonomic efforts suggest that we can. But the fact of the matter is, it is much more difficult to see the cumulative changes in phenotypes separated by 100,000 years than it is in phenotypes separated by 5–6 million years. Why? Because various evolutionary processes, especially natural selection, have had 50–60 times longer to effect change in the latter sample than in the former. The effects—morphological or otherwise—are much more evident than they are when a shorter period of time is involved. If we shorten the period to 10,000 years, we do not see any change. Does this mean that evolution has stopped operating on humans? No, it means simply that the time span is too short to see the large-scale changes that we customarily associate with evolution.

What we have here is a shift in analytical scale, almost as if we were walking toward a large painting and starting to focus on smaller and smaller sections of it. At some distance from the canvas we can see the entire painting and its overall design; such a macroview is indispensable, but by itself it obscures details that become apparent only as we get closer and closer to the canvas. At close range we start to see the microstructure—individual brush marks, the layering of paint, and so forth—that undergirds the larger composite. As we begin to understand the details, do we forget that we are studying small-scale aspects of a large painting? No, but this is exactly what we have done when it comes to evolution and the archaeological record. Forgetting the simple dichotomy between long-term, cumulative evolutionary results and short-term aspects of evolution is responsible for the question, "Where's the evolution?" Skeptics are looking for the big results—the large-scale changes—and missing the point that those large-scale, cumulative results are the end products of countless small-scale changes that took place over a very long time period.

In contrast to the age of the archaeological record elsewhere, the North American record, with which many of us deal, is too short in temporal duration to exhibit many of the large-scale changes we have come to expect of evolution. Further, at most localities we see only segments of that record and not its entire expanse. Thus we are standing

very close to the canvas to begin with. In some respects this might be considered a curse, but on the positive side we maintain for the most part fairly fine-scale temporal control over segments of the record we examine. We might wish that we could do better—say, break sequences down into segments of 50-year duration rather than of 300-year duration—but think how curious this must sound to a paleobiologist who is using segments of a *million* years' duration. How ironic that one group of materialists can see the macropicture and the other usually only the micropicture. Paleobiologists do not have access to the fine detail that archaeologists can see, but they do not doubt that their macroscale picture comprises literally millions of tiny structures and routine processes that went on day after day, century after century, millennium after millennium. They accept such detail as axiomatic. Conversely, archaeologists rarely have access to anything approaching the evolutionary big picture, but they should not get so lost in detail that they forget that it is those details that cumulatively *are* evolution.

We can hardly blame archaeologists for failing to recognize the complementarity of micro- and macroevolutionary perspectives, given that several prominent evolutionary biologists and paleontologists (e.g., Gould, 1996; Huxley, 1956; Mayr, 1982; Simpson, 1949) have stated that humans stopped evolving when they acquired culture. They and others of similar persuasion have done what countless anthropologists have done for well over a century: set humans aside as being something special because they possess culture—what Kroeber (1917) defined as the "superorganic" and White (1959:8) later defined as an "extrasomatic means of adaptation." Under this view, such evolutionary processes as selection and drift do not operate on humans because our capacity for culture has uncoupled us from evolution. Thus, material remains—pottery, metal tools, and the like—are viewed as adaptations; they are conceived as intentional products constructed solely to adjust humans *in a directed sense* to the environmental pressures they face. Instead of attempting to determine whether such features were indeed shaped by selection, and thus qualify as adaptations in the biological sense of the term (O'Brien and Holland, 1992), some archaeologists (e.g., Boone and Smith, 1998) view them as products of a plastic phenotype that can quickly adapt to any problem that the cultural and/or natural environment throws at it.

If such is the case, and culture and its attendant features—such as intelligence, creativity, and intentions—have created a chasm between humans and evolutionary processes, then a Darwinian perspective is nonapplicable to the vast majority of the archaeological record. We contend, however, that culture is simply one adaptive response that a particular lineage of organisms evolved; as such, it does not exempt its bearers from evolutionary processes. Further, invoking culture as a cause begs the question of when in the course of a cultural lineage's history the culture of the moment became so plastic that it created a shield that natural selection could not penetrate (Lyman and O'Brien, 1998).

Epistemologically, invoking culture as a decoupling agent locates cause in the wrong place. Yes, culture is a different mode of transmission than are genes, though we view this more in quantitative rather than qualitative terms in light of what is known of animal behavior (e.g., Bonner, 1980, 1988), and yes, there can be no doubt that the tempo of cultural transmission differs significantly from that of genetic transmission. But do these differences lead to the conclusion that humans as organisms have evolved the means to stop evolving—that they somehow are beyond the reach of selection? Do these differences indicate that other evolutionary processes such as drift play minimal roles in reshuffling *both* somatic and nonsomatic characters? In our opinion the answer to both questions is "no." Humans today are no more immune to evolutionary processes than they were 10,000 or 50,000 years ago. Thus, we agree with what one evolutionary biologist has to say about culture: It merely altered "the components of fitness [and the] directional changes" prompted by selection; "what has happened is that the [selective] environment, the adjudicator of which genotypes are fit, has been altered" (Lerner, 1959:181; see also Dennett, 1995).

Although we have dealt with materials from the historical period over the course of our careers, we do not consider ourselves historical archaeologists; thus we would not presume to tell those with more experience in the subject how to structure their research agendas to do evolutionistic studies. Even with our limited experience, however, we see enormous potential in the historical-period record for

understanding past selective environments and their effects on the fitness of the human groups that inhabited them. In numerous cases, the requisite groundwork has been laid for such analyses, or at least previous investigations have pointed out interesting avenues to be followed.

One such avenue is in the broad area of pattern-recognition studies made popular by Stanley South (e.g., 1977, 1978), which rest on the assumption that similar behaviors common to two or more groups will leave similar archaeological signatures. For example, there appear to have been some similarities in the behaviors of plantation overseers in the southeastern United States that led to particular patterns in the material record, just as there appear to have been similarities in the behaviors of slaves that led to different patterns. John Otto's (1977, 1984) analysis of Cannon's Point Plantation in coastal Georgia was based on this premise and there are dozens of other similar examples that could be cited. Even the most strident evolutionary archaeologist would agree that there are threads that connect similar behaviors to similar sets of artifacts in the archaeological record. The problem is in deciding whether particular patterns are the result of homology (similarity because of heritable continuity) as opposed to analogy (convergence). Heritable continuity could be at any of several scales—household, interrelated households, and so on—and in some cases is undoubtedly tied to such things as status, ethnicity, and perhaps most important, economics (e.g., Orser, 1988a, 1988b).

Charles Orser (1989) is correct in pointing out the lack of theory behind pattern-recognition studies. Patterns are extensionally defined units, being products of a small sample of the thousands of cases that exist, and of course provide no explanation for why the patterning exists in the first place. For example, Orser (1989:30–31) points out that the "explanation" for South's (1977) British Colonial "Tea Ceremony" subpattern, represented by broken, discarded pieces of tea sets, resides, according to South, in a social-psychological need. To us, as to Orser, this is not a particularly satisfying "explanation" because it is not derived from theory. Where theory *can* help us is in understanding the role of the tea ceremony in driving the explosion in pottery production in England during the late nineteenth century. The fortunes of Wedgwood and other pottery manufacturers were in large part tied to the meteoric rise in tea and coffee drinking in England and the United States, and many of the decisions manufacturers made in renovating and expanding their pottery works were based on an exponential growth in demand for beverage services (Hower, 1932; Stone, 1984). This, as John Langton (1984) points out, was a clear-cut case of positive selection of a particular social practice. In a similar vein, consider the almost overnight success of Wedgwood's "Queen's Ware," which went through some 7,000 experiments before it was perfected. This, as Langton (1984:340) also points out, can be viewed as another case of "sociocultural selection, in which one type of pottery proliferated and displaced other, less desirable forms."

Regardless of the selective agent—whether human or nature—selection is still selection, and the outcome is the same: the increased "fitness" of one kind of artifact over another. Of course, what we are interested in is the fitness of humans, but we use the *replicative success* (Leonard and Jones, 1987) of artifacts, which are parts of phenotypes, as a proxy measure. The phenomenal success of Queen's Ware was not an accident—selection drove its ascendancy—and neither was the rise in fortunes of those who produced it. Whatever the social "need" was that drove the rise in popularity, that need was a selective agent, and it directly affected the fitness both of those who successfully manufactured and marketed Queen's Ware and those who did not. We might hypothesize that purchase and use of Queen's Ware also affected the fitness of consumers, but this remains to be tested. Some archaeologists might wonder how fitness is tied to the dishes a family purchased. Such wonder results only if the definition of fitness is so narrow and reductionistic that it applies only to the number of offspring that one organism produces relative to another. Number of offspring is but one measure of fitness. How well does one organism or group of organisms care for the offspring it *does* have, irrespective of absolute numbers, versus how another organism or group cares for its offspring? How well does one organism or group do relative to another in terms of accumulating wealth? Or in signaling the wealth it has accumulated—regardless of whether it is through the use of architecture, tableware, or some other means? These questions are nothing if

not evolutionary ones, and we believe they can be addressed by historical archaeologists (e.g., Neiman, 1999).

Conclusions

History is critical to any Darwinian evolutionary study, whether undertaken in biology (see chapters in Nitecki and Nitecki, 1992) or in anthropology. From an anthropological perspective, "Darwinian theory is both scientific and historical. The history of any evolving lineage or culture is a sequence of unique, contingent events" (Boyd and Richerson, 1992:179–180). In both the biological and social domains, "'science' without 'history' leaves many interesting phenomena unexplained, while 'history' without 'science' cannot produce an explanatory account of the past, only a listing of disconnected facts" (Boyd and Richerson, 1992:201). Archaeology's claim to unique status within the human sciences is its access to portions of past phenotypes. Ethnographers, sociologists, psychologists, historians, and others who study humans are limited to living humans or written records. Only archaeologists have access to the entire time span of culture, however it is defined. The important point is that historical questions are the most obvious ones archaeologists can ask. This, of course, is hardly a strong warrant for asking them. However, we believe archaeologists should ask historical questions not only because they have access to "our only direct source of information about the course of evolution" (Stanley, 1981:72), but also because answers to historical questions are critical to gaining a complete understanding of why particular cultural manifestations occupy particular positions in time and space. The key word is "particular," for history *does* matter (e.g., Gould, 1986; Lyman and O'Brien, 1998; O'Brien and Lyman, 2003a). It is in part for that reason that since the beginnings of anthropology and archaeology as distinct disciplines, practitioners have employed analytical units that reflect cultural transmission and history (Lyman and O'Brien, 2003) and grappled with versions of evolution (Lyman and O'Brien, 1997).

To write a functional explanation for why a bird migrates south every autumn is one thing; to know the historical reasons for its heading south is something else entirely (Mayr, 1961). In the latter case, the evolutionary history of that bird matters a great deal. Similarly, to understand how and why early nineteenth-century colonists in the midwestern United States behaved a particular way requires that we know how those colonists behaved at earlier times. In other words, their evolutionary history matters. Note that it is *their* evolutionary history that matters, not the history of some other group that we attempt to use as a universal proxy for colonists. Failure to maintain this distinction is the weakness underlying previous pattern-recognition studies in historical archaeology. Without demonstrating heritable continuity among the units included in an analysis, it is impossible to untangle homologous and analogous traits.

We agree with Robert Bettinger and Peter Richerson (1996:224) that knowing the functional reason why a dog pants—to regulate body temperature—is important, but we disagree with their assertion that one need "not question that this panting is the result of a long evolutionary history." To relegate history to such a low status misses the point that more and more biologists (particularly paleobiologists) are coming to accept: To be considered an adaptation, a trait must have a history demonstrating that it was shaped by selection (Brandon, 1990; Burian, 1992; O'Brien and Holland, 1992; Sober, 1984; West-Eberhard, 1992). However, we fully agree with Bettinger and Richerson (1996:224) that "functional responses frequently contain important clues about evolutionary history that are worth paying attention to." This is where behavioral archaeology (e.g., Schiffer, 1996) and human behavioral ecology (e.g., Bird and O'Connell, 2006) have made important contributions. That using adaptationism—the study of adaptations and their functions—as an explanation must be done with a high degree of caution has been noted by both evolutionary biologists (e.g., Gould, 1996, 1997; Gould and Lewontin, 1979) and evolutionary archaeologists (e.g., O'Brien and Holland, 1992, 1995b).

But again, understanding adaptive function is not the same as explaining where a particular feature came from or *why* it arose when and where it did. At the risk of being redundant, we believe that

historical understanding must precede many questions concerning functional or adaptational understanding. That is why we have devoted considerable space in this chapter to seriation and heritable continuity. From an evolutionary perspective, to "*explain* means to identify a mechanism that causes evolution and to demonstrate the consequences of its operation" (Bell, 1997:1). The mechanisms are selection and drift (transmission), and the causes precede the effects of the working of the mechanisms. Selection and transmission are historical mechanisms; they operate every moment, at some times more strongly or more rapidly than at others, creating the varying tempo of evolutionary change over time. So what is history other than the passage of time? Robert O'Hara (1988:144) provides a useful discussion:

> [G]enerally speaking a *chronicle* is a description of a series of events, arranged in chronological order but *not* accompanied by any causal statements, explanations, or interpretations. A chronicle says simply that *A* happened, and then *B* happened, and then *C* happened. A *history*, in contrast to a chronicle, contains statements about causal connections, explanations, or interpretations. It does not say simply that *A* happened before *B* and that *B* happened before *C*, but rather that *B* happened *because* of *A*, and *C* happened *because* of *B*.... *Phylogeny* is the *evolutionary chronicle:* the branched sequence of character change in organisms through time.... [H]istory, as distinct from chronicle, contains a class of statements called *narrative sentences*, and narrative sentences, which are essential to historical writing, will never appear in [chronicles]. A narrative sentence describes *an event*, taking place at a particular time, with reference to *another event* taking place at a *later* time.... Just as narrative sentences distinguish history from chronicle, *evolutionary narrative sentences* distinguish evolutionary history from evolutionary chronicle.

O'Hara makes two critical points: first, false or inaccurate chronicle cannot result in accurate history; second, narrative sentences provide the explanations of why chronicles look the way they do. Culture historians recognized these distinctions decades ago (Lyman and O'Brien, 1997; Lyman et al., 1997), but they could not escape the same problem that plagues evolutionary biology today (O'Hara, 1988)—conflating the explanation of *states* and the explanation of *events* of change. The former comprises essentialist, or typological, thinking; the latter comprises materialist, or population, thinking and distinguishes Darwinian evolution as not only a different theory of change but a different *kind* of theory (Lewontin, 1974). Archaeologists often fail to recognize this and attempt to explain the difference in culture states—culture types—in anthropological terms as opposed to explaining change in Darwin's materialist terms.

We underscore the importance to evolutionary studies of showing that a particular phenotypic trait has a positive fitness value (Lyman and O'Brien, 1998; O'Brien and Holland, 1992). In archaeology, this requires that the mechanical properties of artifacts be measured (O'Brien and Holland, 1995b; O'Brien et al., 1994) in a manner similar to that in which one determines the panting dog is regulating its body temperature. Does a particular kind of pottery work better within the particular time–space position it occupies than does some other kind of pottery? If so, why? How does that particular *state* of pottery work in that context? But this is only the first question that must be answered. Additionally, what is the selective environment in which it is found, and what were the selective environments that led to its appearance? What was the history that led to the establishment of that kind of pottery? These are questions about the history of change in pottery. The second set of questions is what makes evolutionary archaeology evolutionary. Answering the questions regarding pottery state requires the use of immanent properties and processes, or an essentialist ontology; answering the questions regarding pottery *change* requires the use of configurational properties and processes, or a materialist ontology.

As we detail elsewhere (Lyman and O'Brien, 1998), potential objection to such a position is found in Bettinger and Richerson's (1996:226) statement that "given time's ravages, few archaeologists will ever be privileged to participate in constructing a 'how actually' explanation." We agree, though the stories constructed under evolutionary archaeology are theoretically informed and thus are testable rather than inductively generated inferences. We also point out that paleobiologists are faced with the same problem, but they do not throw up their hands and focus on modern organisms as analogs to long-dead ones. Brandon (1990) remarks that when a "how possibly" explanation accounts for numerous observations and provides an empirically and logically coherent explanation, it

attains the status of a "how actually" explanation yet remains testable in light of new evidence. Additionally, "no one can fairly describe [such a 'how possibly' explanation] as merely an imaginative bit of story telling" (Brandon, 1990:183).

It does not strike us as storytelling to find in Darwinism answers as to why humans behaved as they did at particular times and in particular places. As we see it, there are only two reasons *not* to find answers there: either evolutionism itself is bogus or evolutionary processes no longer affect humans. We do not believe either reason is valid. But having said that, neither do we believe that humans are automatons who wander aimlessly through life waiting to be selected against. We often hear such a position ascribed to humans. Alternatively, we have heard the remark that we view humans as fitness-maximizing individuals who carefully select the options that allow them to be the most reproductively successful. Neither position is correct. Rather, we have consistently made the statement (e.g., O'Brien, 1996b) that there is nothing in evolutionary theory that states that organisms must always act in accordance with some maximizing strategy. As Richard Dawkins (1990:188–189) puts it, "Individuals do not consciously strive to maximize anything; they behave *as if* maximizing something. . .. [I]ndividuals may strive for something, but it will be a morsel of food, an attractive female, or a desirable territory." As Darwin himself figured out, no such thing as a perfectly adapted organism has existed or will ever exist. All he ever had in mind when he adopted Herbert Spencer's phrase "survival of the fittest" was for "the *tendency* of organisms that are better engineered to be reproductively successful" (Burian, 1983:299; emphasis added). In other words, "If *a* is better adapted than *b* in environment *E*, then (probably) *a* will have greater reproductive success than *b* in E" (Brandon, 1990:11).

Our job as archaeologists is to figure out *why a* is better adapted than *b* at a particular time and in a particular place. This requires a thorough understanding of the social and physical environment and of the selective pressures created by that environment that impinge on the success of *a* and *b*. Since neither *a* nor *b* sprang from nothingness, we need to understand their origins by tracing ancestral lineages and documenting changes that took place within those lineages that eventually led to the origin of *a* and *b*. Importantly, *a* and *b* are what we have referred to as ideational units; as such, they are devices used to measure change in ever-evolving lines. In other words, they are chunks of a continuum that *for the moment we are calling* a *and* b. They thus are not real in an empirical sense. Given our upbringing as anthropologists, it is difficult *not* to impart a reality to units, but such is impossible if, as materialism maintains, things are always in the process of becoming something else. This perspective is not science-speak or hand-waving; it is the heart of Darwinian evolutionism. The historical-period archaeological record, itself simply a convenient chunk of the temporal continuum, offers an excellent laboratory in which to expand the domain of the materialist perspective—that is, to rewrite Darwinian evolutionism in archaeological terms.

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World-Systems Theory, Networks, and Modern-World Archaeology

Charles E. Orser, Jr.

Introduction

Archaeologists have been interested in research questions that by their nature spatially expand their investigations beyond the boundaries of a single site or even a small complex of related sites. Archaeologists with several topical specialties have investigated large topographical spaces, but an interest in extra-site space is particular pertinent to archaeologists examining the Postcolumbian world because of the global contacts that have occurred since about 1500 CE. This essay mainly focuses on world-systems theory, a set of concepts and approaches that permits the study of large networks of human interaction over broad spaces, and network theory, a less-specific, but perhaps more robust method of analysis of archaeology. Since its inception in the 1960s, world-systems theory has been used widely by archaeologists engaged in studying many aspects of human history. Within recent years, research in world-systems theory has grown, and this area of research today attracts a broad range of scholars from many different disciplines. Network theory has been less widely applied by archaeologists, despite the fact that it has abundant potential for archaeological analysis.

Theoretical Foundations

World-systems theory is not a conceptually unified way of examining the world. Rather, the theory is best conceptualized as an approach to conceptualizing macroscale cultural–historical phenomena that, in essence, has at least three common denominators: (1) a hesitancy to accept the independent validity of sociohistorical entities, such as tribes, peoples, and even nations as self-contained, isolated units; (2) an emphasis on a concept of relations to account for the interconnectedness of sociohistorical units through time and across space; and (3) some notion of systemic processes to help explain the nature of these relationships (Reno, 1996:6; see also Peregrine, 1996:1).

World-systems theory developed as part of the intellectual exercise directed toward understanding what it means to be "modern." Twentieth-century social thinkers who examined modernity—across a range of disciplines and using diverse conceptual models—have generally agreed that modernity represents a continuing process rather than a static condition or stage of evolutionary development. Not surprisingly, however, individual theorists have placed different emphasis on precisely what constitutes "the modern." For some, the act of becoming modern involves a relatively straightforward process that includes individuals confronting and taking advantage of key technological or scientific innovations (Antonelli et al., 1992; Black et al., 1991). Others perceive modernity to be reflected in a bureaucratically controlled consumerism (Lefebvre, 1984), while others conceptualize modernity as reflecting specific relationships between a society's base (where modernization occurs) and the superstructure (the ideological locus of modernism) (Jameson, 1991:310). Less important for archaeologists than how one may wish to define "modern times," or, once defined, to periodize this age, is the idea that a unique archaeology of the modern world

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exists (Orser, 1996, 1999, 2000, 2004a, 2007b), and that world-systems theory provides one way to investigate it.

Understanding precisely how people and their social groups "become" modern naturally has occasioned considerable debate, both in academic and nonacademic policy-making settings. The seriousness of the debate was anchored in post-World War II attitudes toward "helping" non-Western peoples, with much of the decision-making by the developed nations being rooted in the belief that non-Westerners could improve their lot through a conscious acceptance of "modernization."

Ideas about the nature and effects of modernization are numerous and varied, but until recently they could be divided into two large categories: modernization theory and dependency theory. These theoretical camps developed after 1945 at the termination of the first military conflict that was truly global in nature. It must be noted, however, that the basic, overarching theoretical principles of modernization extend to the Enlightenment (see, e.g., Outram, 2005).

Modernization theorists tend to believe that all peoples, regardless of their customs, belief systems, or location in the world, can start on the road to modernity given the proper conditions. All that they require for the process to begin—for them to reach the so-called "take-off stage"—is for them to be presented with the opportunity. The most direct way to provide the conditions for "take-off" is for those with the most economic resources—usually large, industrialized, bureaucratic nations—to invest funds in non-industrialized places. Modernists believe, barring unforeseen complications, that this "investment in the future" should provide the necessary conditions for modernity to begin. The ultimate success of the process rests in the hands of those on the receiving end of the investment, because they must have the political structure, economic ability, and social desire to take advantage of the opportunity. Simply put, the people must have the will to "succeed." In addition, they must have political leaders who are willing to tackle the "modernization revolution" (Black et al., 1991:18). In reality, the political acceptance of modernization often includes making significant concessions to the contributing nations. These concessions can involve military intervention, political subservience, and loss of control over the developing nation's extractive products. The institutions promoting modern development typically encourage the construction of roads, dams, schools, factories, and other elements of "modern" living. If such tangible superstructural improvements do not foster modernization, that is "progress," the agents of modernization must work pragmatically to remove the "obstacles to improvement," whatever they may be (Gardner and Lewis, 1996:13–14). Such conscious action may include the destruction of "traditional" ways of life, programs that have considerable archaeological and anthropological import (Marliac, 1997, 2004; Miller, 1980; Robbins, 1999).

Dependency theorists disagree with modernization theorists. Though they work alongside modernization theorists, they offer a different interpretation of the modernization process. Heavily influenced by Marxian concepts, dependency theorists see modernization as an inherently unequal process. For them, "modern" nations exist only because their capitalist leaders have been willing and able to exploit the world's less technological peoples for their own gain (Hopkins, 1982:10–11). The underdevelopment of what was once called "The Third World" thus can be explained by the oppressive power of modern "haves" exploiting "have-nots," typically definable by their geographic location and their "non-modern" mode of living. This explanation for the material inequalities that became glaringly obvious during and immediately after World War II was not restricted to academic circles. Leftist revolutionary leaders in South America and elsewhere based their radical arguments against capitalist intervention on the work of dependency theorists in an effort to prove that programs of modernization could have deleterious implications for many of the world's peoples (Kirby, 1997:61–62).

Modernization and dependency theories had at least 20 years of serious longevity, but by the 1980s some development policy makers began to believe that neither theory had any lasting explanatory power. The "theoretical vacuum" that arose from the rejection of these two heretofore well-accepted, though controversial, theories led to an impasse in development thought (Booth, 1985; Schuurman, 1993). Many contemporary development theorists reject both theories in favor of a more postmodern perspective that views culture as an active discourse that involves the conscious actions of real men and women (and even children) who do not necessarily

act and react in accordance with large-scale grand theories (Gardner and Lewis, 1996; Kirby, 1997). The new perspective has been termed "articulation theory" (Reno, 1996:1–2). In a practical sense, though, many of the men and women who make daily decisions about development policy still use a modernization perspective, believing perhaps that investment capital can solve the world's problems. Critics use both dependency theory and postmodernism to refute the modernists' claims.

Dependency theorists created world-systems theory to explain inequality in global terms (Bach, 1982:165). World-systems theory has two varieties, each one being associated with a particular, prolific proponent. World-systems theory is identified with the work of sociologist Immanuel Wallerstein (and also more recently with sociologist Christopher Chase-Dunn), while world systems theory (with no hyphen) is mainly associated with the writings of political economist Andre Gunder Frank. Archaeologists have employed both variants in their research.

World-Systems Theory

As initially explained by Wallerstein (1974, 1979, 1980), the basis of world-systems theory is contained in the idea that, since the sixteenth century, a single capitalist world-economy has been the driving force behind the creation of the modern world. This "modern world-system" is exceedingly complex in its specific details, but in general, it incorporates three central features: (1) a single expanding economy, (2) expanding multiple states, and (3) the capital–labor relation (Hopkins, 1982:11).

The capitalist world-economy is distinguished by a mode of production organized around profitable exchange within a market economy (Wallerstein, 1979:159). The central structures of the world-economy are: (1) the world class system, (2) the core/periphery hierarchy, (3) the interstate system, and (4) the world market (Chase-Dunn, 1989:4). As a world-economy, capitalism incorporates a worldwide, single division of labor—simplistically modeled as divided between owners of the means of production and workers who use the means of production—situated within diverse cultural settings (see Blaut, 1993:206; Harvey, 2001:253–256). Capitalism, for all the power its agents can weld, is not political per se, and so the world-economy has an overarching economic structure but no consistent political framework. In fact, the integration of the system is maintained by the economic interdependence between the political units, not necessarily by political alliances (Chase-Dunn, 1992:11).

One of the primary characteristics of world-systems theory is that it exhibits a special spatial model that consists of cores and peripheries. In the capitalist world-economy, the cores are central places from which production and capital emanate, whereas the peripheries are places that are dependent on the cores (Murray, 2006:81). Population densities tend to be greater in cores than in peripheries, and competitive wage labor is more likely to occur in the cores, while coerced labor tends to characterize the peripheries. In truth, the terms "core" (or center) and "periphery" are artifacts of the post-1945 era, with both being created by the United Nations' Economic Commission on Latin America in 1948 specifically to distinguish between the industrialized, capitalized North, and the impoverished, nonindustrialized South (Gardner and Lewis, 1996:16; Portes and Walton, 1981:4–7). These dichotomous terms are today largely outdated (Murray, 2006:38), but when couched in such terms, we may easily imagine the unequal relations that were created and maintained between cores and peripheries. And, because world-systems analysis by definition relates to Postcolumbian history, scholars often use the word "cores" to refer to states and "peripheries" to refer to nonstate dependencies. This neat dyad is complicated, however, by the identification of semiperipheral polities, sociopolitical organizations that have characteristics of both cores and peripheries (Wallerstein, 1982:93). To complicate matters further, a periphery of a core may function as a core to another periphery.

The overall goal of world-systems theory is to investigate the nature of the inequalities that were instituted and maintained between cores and peripheries within the capitalist world-economy. The temporal frame of reference for world-systems

theorists tends to begin with the sixteenth century and extend to the present, because the economic inequalities that were built into nascent capitalism continue to be expressed around the world today.

World Systems Theory

Capitalism, as a world-economy, is one of the central characteristics of world-systems theory as formulated by Wallerstein and his followers. As a result, the world-system is technically a modern, Postcolumbian phenomenon. Thus, all those sociohistorical organizations that spread across the known world in Precolumbian times by definition were originally not part of this world-system (though the hard-line distinction between the world-system and the world system has been more fluid recently; e.g., Chase-Dunn and Anderson, 2005). Wallerstein (1979:5–6) refers to these polities as "world-empires." World-empires maintained long-distance trade networks that fostered intercultural contacts, to be sure, but the exchanges did not constitute a major part of their economies. In addition, world-empires were held together politically, but they did not have an overarching economic structure.

Some scholars who would otherwise intellectually accept the notion of large-scale, global systems openly reject a world-systems perspective that foregrounds Postcolumbian capitalism. These scholars see nothing particularly unique or special about capitalist expansion, and argue that world systems (without the hyphen) have been in existence for at least 5000 years. The major proponent of this "continuationist" school (Chase-Dunn, 1993:407) has been Andre Gunder Frank.

Frank anticipated Wallerstein's work by a number of years. In an influential article, Frank (1966) argued that the global spread of capitalism has tended to institutionalize underdevelopment. As agents of capitalism moved outward from metropolitan centers (cores), they created numerous dependent satellites (peripheries). As the centers exploited the satellites for their own benefit, they created and reinforced inequality. Frank used a now-famous term, "the development of underdevelopment," to characterize the patently unequal relations the core's agents forged between the satellites and the metropolises.

While studying unequal relations, Frank came to the conclusion that his ideas about world systems could be extended backward in time beyond the European, capitalist expansions of the sixteenth century. Using the work of two Swedish anthropologists as a springboard (Ekholm and Friedman, 1982; also see Friedman, 1994; Wilkinson, 1987), Frank (1993, 1994; Frank and Gills, 1993) argued that the features of the world-system that appeared with the commencement of Postcolumbian history were in truth one element of a larger Afroeurasian cycle that had operated for thousands of years before the birth of Columbus (Chase-Dunn, 1996:247). For him, the rise of Europe in the sixteenth century was only one expression of a cycle that witnessed the rise and fall of core states, a process that extended at least into the Bronze Age (Frank, 1993:389; Gills and Frank, 1992). According to Frank, core–periphery relations have existed for centuries across the globe and are nothing new. Therefore, he advised scholars of world history not to place too strong an emphasis on the European development of capitalism (and the concomitant transition from feudalism to capitalism) as the most important feature of world history. His hope was to develop a truly global perspective, rather than a perspective that emanated from Europe (see Frank, 1998:8–34).

Frank (1993) made his case about the longevity of world systems by using archaeological information from western and central Asia. Sites located in Mesopotamia and elsewhere in the region provide evidence for the interconnectedness of ancient peoples by the kinds of artifacts that co-occur in the deposits of spatially dispersed sites.

Historical analysis supports Frank's thesis. Using historical sources, Janet Abu-Lughod (1989) has documented that large, non-capitalist world systems existed well before the rise of Europe. She shows that between 1250 and 1350 CE, Europe was only a small upstart among the more established networks that then blanketed the Eastern Hemisphere. Each one of the eight commercial networks she identifies—stretching from Genoa to Canton—incorporated elements that also may appear in capitalism: a standard currency, systems of credit, mechanisms for sharing risk, and pooled capital resources. Merchants became vastly wealthy in

all eight systems and were practically identical economically. This research, coupled with Frank's (1998) more recent work, argues against European exceptionalism and downplays any kind of historical disjuncture that occurred because of the rise of capitalism.

To summarize, beginning in the 1960s, two strains of world(-)systems theory have been developed. Wallerstein's version begins with the European exploration of the world and the concomitant spread of the capitalist world-economy, whereas Frank's version posits that world systems have existed since the Bronze Age. We may well imagine that historical archaeologists would be interested in each theory, perhaps particularly in Wallerstein's since he specifically designed it around Postcolumbian history.

World-Systems Research in Archaeology

Archaeologists can find much in world-systems theory to interest them. At the very least, the large-scale, interregional perspective provides a structure for analyzing connections between peoples who are different in culture and location. At first glance, it may appear that prehistorians with such interests would be inclined to use Frank's variant of world systems theory because he refutes the centrality of capitalism. That Wallerstein tended to ignore pre- and non-capitalist societies was not lost on those prehistorians who first tried to employ world-systems theory in their research (e.g., McGuire, 1992:137). To be fair, however, Frank constructed his ideas on long-distance world systems at the time when archaeologists were only just discovering Wallerstein. As a result, in the initial years of adoption, archaeologists either used Wallerstein's ideas wholesale or sought to adapt them to their particular research environment.

The Early Years of Adoption

When they first discovered world-systems theory, some archaeologists attempted to employ its central tenets to their own research throughout the world (e.g., Algaze, 1993; Blanton and Feinman, 1984; Blanton et al., 1992; Champion, 1989; Chase-Dunn and Hall, 1991; Edens, 1992; Hall and Chase-Dunn, 1993, 1994; King and Freer, 1995; Kohl, 1987; Peregrine, 1995; Peregrine and Feinman, 1996; Rowlands et al., 1987; Sanderson, 1995; Schortman and Urban, 1987, 1992). These efforts are distinct and each cannot be assessed here. A brief examination of how archaeologists used world-systems theory in the 1980s to explore connections between the American Southwest and Mesoamerica, however, will help to illustrate some of the promise and problems of the application of world-systems theory to Precolumbian archaeology.

Before the development of world-systems theory, archaeologists seeking to investigate possible links between the prehistoric Southwest and Mesoamerica tended to use two interpretive frameworks to explain the similarities they observed between the regions (McGuire, 1980; Riley, 1980:14–15; Wilcox, 1986:14–28). "Isolationists" argued for independent, endogenous cultural development in the Southwest, whereas "imperialists" favored more exogenous explanations, often experimenting with diffusion and migration models to account for cultural similarities between the two regions (Upham, 1982:206, 1986). After some initial interest in these interpretations, archaeologists began to acknowledge their explanatory deficiencies, and so many began to investigate the relevance of the core–periphery concepts from Wallerstein's world-systems theory. The use of this model was inspired at least in part by the archaeologists' desire to understand "the actual mechanisms of interaction" between cultures in the Southwest and in Mesoamerica (Pailes, 1980:24).

Richard Pailes and Joseph Whitecotton (1979) were two of the first archaeologists to attempt to adopt Wallerstein's concepts to archaeological analysis. As part of this project, they developed the notion of the "Mesoamerican World Economy" as a nonexplanatory, descriptive device to indicate that cultures in the prehistoric Southwest were part of a system whose boundaries stretched beyond the traditional limits of the Southwest culture area (e.g., Willey, 1966:178–181). They argued that the creation of the new term helped to overcome the misconceptions caused by the application of classic archaeological terms like "Hohokam" and "Anasazi," which

are "isolationist." Such terms tend to imply the presence of culturally homogeneous social organizations in the prehistoric Southwest and to deny possibly significant extraregional, intercultural connections. Making the assumption that central Mexico was the system's core, Pailes and Whitecotton's task was to determine the role of the Southwest in the system and to identify its peripheries and semiperipheries. They thus proposed that the ancient Southwest was a periphery to Mesoamerica's core, with regular trade in various minerals and cotton cloth being conducted southward (Pailes and Whitecotton, 1979:113–118; also see Pailes, 1980:36). They argued that Hohokam assemblages do not show extensive Mesoamerican influence because that culture was only slowly drawn into the Mesoamerican World Economy (Pailes and Whitecotton, 1979:115). They note that the strongest evidence for the "systemic relationship" between the Southwest and Mesoamerica comes from the end of the Toltec period. Both Toltec and Hohokam cultures can be shown to have undergone similar cultural adjustments, including increased warfare, site abandonment, and migration (Pailes and Whitecotton, 1979:117–118). Similarities can be identified at archaeological sites in the region, but following Wallerstein's original intention to use world-systems theory to explain inequality, the relationship between the two areas would be judged to be unequal: Mesoamerica, as core, must have exerted more influence on the American Southwest, as periphery, than vice versa (Pailes, 1980:36).

Whitecotton and Pailes (1986) later refined their view of the American Southwest as a Mesoamerican periphery by addressing the criticisms they had faced after the publication of the first article (Blanton and Feinman, 1984; Blanton et al., 1981). As argued by Blanton and his coauthors (1981:246), the Mesoamerican system was neither an empire nor a world-economy in Wallerstein's sense, because Mesoamerica was not held together by a large-scale, systemic economic relationship. Rather, what held the system together was an elite prestige structure that did not encompass all possible interregional exchanges and social interactions. In their view, elites were the "principal social mechanism" behind Mesoamerican culture from about 1000 BCE on, and only in its last two, Precolumbian centuries can the region be perceived as part of a world-economy in the strict sense intended by Wallerstein (Blanton et al., 1981:246). Before that time, the two regions simply interacted according to the wishes of the elites.

This brief overview indicates that archaeologists clearly have encountered problems when attempting to adopt Wallerstein's world-systems perspective to the prehistoric American Southwest. Nonetheless, even given its deficiencies, the theory does offer "a more productive framework for understanding the nature of Mesoamerica as a social entity" than earlier models stressing diffusionist or culturological interpretations (Blanton and Feinman, 1984:674). Critics of the Mesoamerican World Economy stress that concepts from world-systems theory must not be used blindly. They correctly note that, unless forced, Prehispanic Mesoamerica does not fit the conceptual mold outlined by Wallerstein. To make Wallerstein's ideas useful, "an additional category of world economy"—a "precapitalist world economy"—must be formulated (Blanton and Feinman, 1984:676). This world-economy must be structured around the exchange of highly valued luxury items or "preciosities" (after Schneider, 1977) rather than on market mechanisms. Using this framework, archaeologists must fully understand the exchange and consumption of luxury items, because this trade provided the impetus for Mesoamerican expansion and conquest. A reformulation of Wallerstein's framework therefore must include a place for "the systemic properties" of the luxury trade (Blanton and Feinman, 1984:679). In keeping with this line of reasoning, Whitecotton and Pailes (1986:185) agree that the importance of the trade in luxuries, and their distinction from necessities, is a fundamental issue that archaeologists must resolve to comprehend any world-system.

Not all archaeologists accepted that Wallerstein's world-systems theory could find application in the prehistoric American Southwest. After assessing the use of this theory, Randall McGuire (1986, see also 1989) offered an alternative model that integrated regional production and interregional exchange, two key elements needed to postulate a Southwest–Mesoamerican connection. McGuire (1986:245) argues that Wallerstein's failure to account for precapitalist, large-system dynamics represents a major obstacle to prehistorians

attempting to use his conceptual framework. Given the many problems inherent in adapting a Postcolumbian model to prehistory, McGuire (1986:246) proposes that Wallerstein's world-systems theory may serve best as a heuristic device. It can be useful for illustration and inspiration even though it may have little substantive, interpretive value (see also Upham, 1982:6).

Another important point noted by McGuire (1986:245) is Wallerstein's strong emphasis on cores, while tending to downplay, or even ignore, the important roles played by peripheries. Archaeologists often conduct field research in places that might be considered peripheries, and so they cannot be satisfied simply with identifying certain archaeological sites and site complexes as peripheries and then attempt to determine how the core affected them. Such unidirectional analysis may obscure the often-substantial ways in which the peripheries affected the entire system. At the same time, the identification of prehistoric cores, peripheries, and semiperipheries may invent a past that may not have existed (McGuire, 1992:137, 1996:60–61). Any identification of a core is subject to question in the absence of written records supporting its core status.

McGuire's careful analysis amply demonstrates the numerous, potentially serious problems of attempting to use world-systems theory in prehistory. Some scholars have tried to solve the application problem by conceptualizing world-systems in general terms, in ways generally consistent with Frank's view. For example, to broaden the applicability of the theory to Precolumbian epochs, some analysts have adopted the more generic term "core/periphery structures" (Hall and Chase-Dunn, 1996:16). As this term implies, some archaeologists have chosen to ignore the role of capitalism in Wallerstein's original formulation, preferring instead to focus on the nature of the relationships between cores and peripheries. Analysts adopting this perspective have identified two kinds of core–periphery relations: core/periphery differentiation and core/periphery hierarchy (Hall and Chase-Dunn, 1996). Core/periphery differentiation operates when societies at different levels of sociopolitical complexity interact within a network. A core/periphery hierarchy operates when one society in a world-system exercises political, economic, or ideological domination over other societies in the same system. Having made this distinction explicit, Hall and Chase-Dunn (1996:17) construct a typology of core–periphery relations reminiscent of Wolf's (1982) framework, consisting of "kin-based," "tributary," and "capitalist" modes of accumulation.

As may be expected, not everyone has been willing to accept this reformulation. One archaeologist has charged that attempts to use the terminology of world-systems theory, but only after generalizing its characteristics (in effect removing Wallerstein's original intent), merely makes world-systems theory a shorthand for "interregional interaction system" (Stein, 1999:158–159). Prominent scholars using world-systems theory in Precolumbian settings have embraced this association, stating "World-systems are *intersocietal interaction networks* in which culturally different peoples are strongly linked together by trade, political-military engagement and information flows" (Chase-Dunn et al., 2005:92; emphasis added). Such reformulation demonstrates the recent conceptual linkage of Wallerstein's and Frank's frameworks into an analytical structure that is global and pan-temporal (see Chase-Dunn and Anderson, 2005).

World-Systems Theory in Historical Archaeology

Archaeologists investigating Precolumbian sociohistorical settings have difficulty using Wallerstein's version of world-systems theory, essentially because he devised it as a model for Postcolumbian history. Excavators who have tried to use it either have had to mold it to their research designs (which for critics has meant diluting the theory to the point of making it unrecognizable) or have had to create cross-cultural, transhistoric frameworks that tend to be consistent with Frank's broader version of the theory. In either case, the use of world-systems theory has caused some measure of consternation among prehistorians. But what do historical archaeologists think about world-systems theory? We should easily imagine that because historical archaeologists—at least in one sense of the term—explicitly focus on Postcolumbian history (Orser, 2004b:21) they would be

drawn to world-systems theory in great numbers. At a minimum, we should suppose that world-systems theory has received considerable attention among historical archaeologists.

An interest in world-systems theory by historical archaeologists may be expected because some archaeologists seemed to anticipate it. For example, using artifact information collected from the late-nineteenth- and early-twentieth-century town of Silcott, Washington, William Adams (1976) demonstrated how the residents of the town were connected to a continent-wide network of trade. Adams's use of the term "interaction sphere" was reminiscent of the Hopewell Interaction Sphere (Struever and Houart, 1972), and thus may suggest an origin in the analysis of prehistory, but his research in this vein certainly has overtones of world-systems theory (also see Riordan and Adams, 1985). Also, in the same year that Wallerstein published *The Capitalist World-Economy*, an archaeologist explored the relationships between the distribution of artifacts at sites and the sites' place within national and local markets (Spencer-Wood, 1979). It seems logical in a capitalist economy that people living on major roads or on well-traversed waterways would have had greater access to consumer goods than men and women living in relatively isolated areas. Spencer-Wood (1979:125) concluded that "the location of a site strongly conditions the archaeological evidence of its involvement in the national market." But she also understood that though the relationship between location and market access appeared straightforward, the presence of consumer products at Postcolumbian sites is an extremely complicated issue that defies easy interpretation. Her research is not an example of world-systems theory, but it does have implications for further research using the theory. Though preliminary, her research offered two early directions for future inquiry. First, her attempt to link large-scale economics with specific archaeological sites and materials demonstrated the rich conceptual ground historical archaeologists might explore by using world-systems theory. Second, her research illustrated that archaeologists could contribute to an important area of research that up until then had appeared to be the sole domain of text-using, global thinkers.

Robert Paynter (1982) was perhaps the first historical archaeologist to offer an overt application of world-systems theory to the discipline. In his examination of early-nineteenth-century settlement in the Connecticut River valley of western Massachusetts, Paynter was specifically interested in understanding large-scale social relations as a framework for interpreting the material remains of the British world-system. Relying on world-systems models, he employed sophisticated computer analyses to argue that settlements in the river valley had been transformed from peripheries to cores in the 1800–1850 period.

Paynter's work stands out as an early example of the power of world-systems theory for interpreting Postcolumbian settlement, and it was generally well received at the time (see, e.g., Lightfoot, 1984). Some excavation-oriented archaeologists, however, may not have given Paynter's analysis much credence because he relied on cartographic and demographic historical sources and detailed statistics rather than excavated information (e.g., Adams, 1985). Towns constituted his smallest analytical unit, so he did not face the practical problem of having to relate the theory to tangible archaeological remains.

Paynter was not alone in excluding archaeological evidence from his use of world-systems analysis in the 1980s. For example, archaeologists in Australasia also were experimenting with the utility of world-systems theory. Dennis Jeans (1988) explored Australia's place in the capitalist world-economy and provided comments about the role world-systems theory might play in guiding further archaeological research in Australasian historical archaeology. Like Paynter, he did not provide an example using excavated remains. In a later study, Denise Gaughwin (1992) presented another study from the same region. Investigating extractive industries in Northeast Tasmania, Gaughwin began by explaining Tasmania's place in the world economy from 1850 to 1920, and used her considerable understanding of this economy to create a typology of archaeological sites based upon the amount of capital associated with each site. Thus, she distinguished sites where a mining company had spent a great deal of money from smaller, less-capitalized sites. Her model proposed that field surveyors should be able to distinguish these sites by the complexity of their physical remains and also by their importance within the larger world economy.

Like most historical archaeologists pursuing the investigation of overarching frameworks prior to empirical analysis, Gaughwin was careful to note that her ideas were tentative and preliminary. Also in the 1980s, Stanley South (1988) used excavated data to demonstrate how a sixteenth-century Spanish town on the South Carolina coast called Santa Elena was enmeshed in the Spanish world-system. South was explicit in his use of world-systems theory and presented 25 "arguments of relevance," or "postulates concerning the archaeological record" to account for the presence of specific artifacts at Santa Elena (South, 1988:39–43). In his first postulate, South states that the artifacts found at the site should be expected to reflect the change in Santa Elena's position in the world-system from an important power center from 1566 to 1576 to a tribute-collecting center from 1577 to 1587. He specifically designed his postulates to link the archaeological findings with the world-system that his extensive historical research indicated that Spain had operated in the sixteenth century.

By the late 1980s, world-systems theory was a topic of interest to historical archaeologists, although the precise amount of interest is difficult to gauge. In any case, the application of the theory to Postcolumbian archaeology was prominent enough to occasion evaluation and critique. At the time, Mark Leone and Parker Potter (1988) offered the most detailed critique of world-systems theory. They enumerated three strengths of the theory for historical archaeology (Leone and Potter, 1988:4–5). First, they proposed that conceptualizing Postcolumbian archaeological sites as existing within a global system allows archaeologists to conduct comparative studies that stretch across continents. Second, they noted that the world-systems perspective forces historical archaeologists to think about unequal wealth, power, and profit, and from these topics to the broader issues surrounding capitalism. And finally, they stated that the archaeological interest in frontiers (actual physical spaces on peripheries) ultimately speaks to colonialism, nationalism, and imperialism, all central issues in much historical archaeology.

Leone and Potter thus found much that is useful in world-systems theory, but at the same time, they were troubled by an equal number of unappealing features of the theory. They deemed these factors so serious that they considered the use of world-systems theory problematic even in the archaeology of Postcolumbian history. In the first place, because world-systems theory is inherently evolutionary, Leone and Potter did not believe that it could account well for failure, irrationality, or emotion. They observed that world-systems theory is a goal-directed perspective that models the unrelenting march of the capitalist enterprise without taking time to notice the often-tiny but yet significant sidesteps where "progress" is hampered by men and women who wish to remain outside the system. For them, this problem with the theory leads to a second issue that the theory does not provide for—the understanding of indigenous cultures. World-systems theorists may be expert at locating and describing a core's frontiers, but they are less successful in interpreting what happens beyond the cores. This omission is glaringly obvious to anthropologists (e.g., Wolf, 1982:23) and anthropologically trained archaeologists. And finally, Leone and Potter argued that world-systems theorists have generally been unable to create a strong connection between past and present. World-systems theorists may cast the past in terms of the present without being explicit about the ways in which one relates to the other. Leone and Potter thus see the root of the problem resting in the theory's essentializing functionalism. Its users tend to believe that "the elements of a society can be fitted together to achieve a view to how that society worked or works" (Leone and Potter, 1988:3).

At the time, Leone and Potter's critique was supplemented by archaeologists who rejected world-systems theory outright by arguing that archaeologists simply cannot excavate entire systems (Schuyler, 1988). After all, archaeology is, at its foundation, an intensely local endeavor, with a central focus usually being on one particular locale, or even one specific place within a locale. This stance is difficult to argue against on a practical level, and this criticism alone undoubtedly has kept many historical archaeologists from exploring world-systems theory. Accordingly, many historical archaeologists simply ignored world-systems theory. For example, the concept is totally absent in the oddly mistitled book, *Historical Archaeology in Global Perspective* (Falk, 1991). The closest approximation to any kind of global approach in

the book is James Deetz's (1991) call for an "international comparative approach to historical archaeology." Deetz (1991:8) clearly conceptualized something intellectually akin to world-systems theory in this approach, but he neither mentioned the theory by name nor explained how archaeologists could develop the international approach beyond the simple comparison of artifacts from one part of the world with those from another. He did mention linking cores and peripheries (which he termed "two different places") and he explored the affinities between England and the Eastern Cape province of South Africa. In the end, however, he offered few insights on how one could tie the places together.

The reticence to explore the utility of world-systems theory in historical archaeology, however, was not universal. In the early 1990s, a number of students prepared doctoral dissertations that tested the application of world-systems theory to their areas of interest.

Aron Crowell (1994, later revised and published 1997) examined a number of sites on Kodiak Island, Alaska, explicitly using world-systems theory to conceptualize the late-eighteenth- and early-nineteenth-century Russian fur trade in North America. Crowell argued that the Russians instituted a mode of production in the region based upon the payment of a tax on the indigenous inhabitants of Alaska and Siberia. This structure constitutes an example of Wolf's (1982) "tributary system." Trade goods, given to indigenous hunters and headmen as rewards, were distributed throughout the system based on the intensity of Russian contact. The complexity of the system's operation was demonstrated in the archaeological remains by the Russian fur traders' reliance on Native material culture. Their growing dependency matched the Natives' reliance on the introduced material culture. Crowell's use of world-systems theory created a heuristic structure within which he could conceptualize and investigate capitalist expansion and exploitation. The well-developed core manufactured the goods given to the indigenous inhabitants of the peripheries, with production being manipulated to meet the demands of the Native fur trappers. In this tributary arrangement, the Natives were expected to supply the Russians with hostages, labor, and food. Earlier archaeologists may have modeled the relationship between the indigenous Unangan and Qikertarmiut groups and the Russian fur traders as one based purely on acculturation, but Crowell's use of world-systems theory immediately established their relations as unequal, hierarchical, and linked in a two-directional way.

In another study, Ronald Reno (1996) used world-systems theory to analyze charcoal production in the Eureka Mining District of Nevada between 1869 and 1891. After examining hundreds of features associated with the production of charcoal and after extensive archival research, Reno concluded that the charcoal industry was but one subsystem within industrial capitalism. A network of face-to-face social relations made the subsystem operate, rather than simply the iron fist of the mine owners. Middlemen linked miners and smelters into a single mode of production. As noted above, Reno used articulation theory to extend world-systems theory. Articulation theory relies less on the conceptualization of discrete entities, such as cores and peripheries, and more on the relations between interacting individuals and polities (see Berman, 1984 for further information). The society that developed around Eureka, Nevada, did not embody a rigid capitalist hegemony—as the strictest use of world-systems theory might demand—but rather was characterized by a series of negotiations between mine owners, their agents, and the workers. Reno's findings are significant because he indicates that social relations may be a more fruitful line of inquiry than a dogmatic adherence to world-systems theory.

In another doctoral dissertation, completed in 1998 and published in 2003, Mark Groover employed world-systems theory to investigate the Gibbs farmstead in southern Appalachia. Groover used the core–semiperiphery–periphery structure to model the economics of the region between 1790 and 1920—the dates of the site's occupation—because of the area's history of unequal development. Groover argued that southern Appalachia effectively operated as a periphery from which resources and commodities were extracted, beginning with the extensive deerskin trade of the eighteenth century. Equally important to the capitalist world-economy is the creation of a consumer culture, which Groover documented at the Gibbs site using excavated artifacts.

Is There a Future for World-Systems Theory in Historical Archaeology?

The continued use of world-systems theory, even in revised form, indicates the interest some historical archaeologists continue to show in the perspective. As noted above, however, use of world-systems theory is not without controversy, and individual archaeologists hold different opinions about the theory, ranging from complete acceptance to complete rejection. Some adopt a middle course, opting for a cautious acceptance based on modification.

Some archaeologists reject world-systems theory as "totalizing" (Lucas, 2006:39), but many others, in addition to those cited above, have adopted a more measured approach, arguing for careful evaluation before complete rejection (Baram and Carroll, 2000:13–15; Gibb, 1996:9; Jamieson, 2000:17). Most archaeologists who have explored the utility of world-systems theory in their research have concluded correctly that it must not be used slavishly. The model of cores–semiperipheries–peripheries should not be used to create a historical reality that did not exist (Kohl, 2007:246). The labeling of archaeological units in this fashion undoubtedly carries the risk of reification, though it must be said that this problem is not unique to the application of world-systems theory.

Scholars in many disciplines continue to explore the utility of world-systems theory for understanding both historical and contemporary life. Much of the recent research appears in the *Journal of World-Systems Research*, but other journals (such as *Globalizations*) also contain articles that help to extend the concept of global analysis. Sociologists continue to show sustained interest in world-systems theory (e.g., Bata and Bergesen, 2002; Grosfoguel and Cervantes-Rodríguez, 2002; Hall, 2000; Podobnik and Reifer, 2004), and geographers, too, have continued to investigate world-systems theory and other global models (Blaut, 1993; Harvey, 2001:253–266; Moore, 2003; Murray, 2006:31, 45). Historians and anthropologists have examined long-term history and large-scale geographical space in terms that generally are consistent with the basic tenets and goals of world-systems research, albeit usually without directly referencing it (e.g., Harland-Jacobs, 1999; King, 1997; Linebaugh and Rediker, 2000; Nussbaum, 2003; Tsing, 2000). Much of this research stresses the examination of globalization as a cultural phenomenon, rather than focusing on world-systems theory per se. Even many archaeologists continue to investigate large-scale issues, such as global change (Hardesty, 2007), but generally do so without acknowledging world-systems theory.

Archaeologists, even those investigating the modern world, have legitimate concerns about adopting world-systems theory in its entirety. The charge that its use may tend to force the creation of analytical units that do not match past actuality is perhaps the most serious charge against it.

Many of the problems associated with the application of world-systems theory to archaeological analysis can be overcome by adopting an overt network model. I have explored the archaeological use of network theory elsewhere (Orser, 1996:29–55, 2004b:61–62, 2004c:119–125, 2005, 2007a), so only a brief overview is necessary here. A salient point is that network theory is generally consistent with the goals of world-system theory, but without the need to reify or to give artificial preference to cores, semiperipheries, or peripheries. Rather, network theory emphasizes the connections between sociospatial entities however they are defined in each sociohistorical context.

The basis of social network theory, as opposed to the network theory of applied mathematics and physics, is that humans interact through a series of connections or social relations. The relations, which include complex human-to-human and human-to-environment associations, occur within distinct sociohistorical settings. As a result, the social relations only have meaning within that social milieu. Of course, however, the social milieu can be local, regional, or, in the case of Postcolumbian history, intercontinental and cross-cultural.

Social networks are easy to conceptualize as a collection of points (also called nodes or vertices) connected by lines (called links or edges) (Haggett and Chorley, 1969:5; Wasserman and Faust, 1994:93). Whereas sociologists may examine the way in which individuals interact in a social club or political institution, the archaeologist's concern with networks also must incorporate the role of material culture in fostering and maintaining social connections. Given the temporal strengths of archaeological research, archaeologists must keep in mind that social relations, both human and

environmental, extend through time and across space. Time depth and spatial expression are important components of network theory in archaeology, especially in the Postcolumbian era, when long-term, large-space affiliations were created as part of the capitalist world-system.

The role of capitalism in the sociohistorical formation under investigation, of course, must be determined, but, in general, the inclusion of capitalism as both an economic and an extra-economic variable means that issues of unequal power necessarily must be considered. Here, again, we can see the role of world-systems theory, because it models unequal relationships as given. In archaeological research, however, the direction of the unequal relations is not known a priori. For example, settlers from Europe in North America may have had greater technological power than indigenous peoples, but indigenous peoples definitely had greater power over the understanding of the environment.

One strength of network theory is that it permits the investigation of socio-spatial units on various scales. This ability of social network theory retains the basic goal of world-systems theory without the fear of reification. Archaeologists are never bound to the limits of a single site, nor are they required to decide whether and perhaps when a site, site complex, or regional cultural expression operated as core or periphery. Rather, they are free to examine the connections between peoples and places without the need for such identification.

The ability of archaeologists to move across temporal and spatial scales is of paramount importance. The application of world-systems and network theories depends upon it. Regarding world-systems theory, Feinman (1996:118) made this explicit: "as long as world-systems scholars proclaim the macro-scale to be the most important unit for sociohistorical analysis, I do not see world-systems perspectives gaining their deserved attention in archaeology." Thus, for world-systems theory to have any usage in archaeology, even historical archaeology, archaeologists must be willing to be ever mindful of the grand ideas of the theory, but yet always conscious of the tiny details at individual sites. The most recent research noted above demonstrates how the dual focus on macro- and microscales is possible.

Conclusion

Without question, world-systems theory has had an impact on archaeological research since Wallerstein and Frank first presented their ideas. Archaeologists immediately found their ideas and concepts intriguing because they appeared to provide ways to investigate both the small and the large. Archaeologists investigating Precolumbian history soon discovered, however, that perspectives that incorporated capitalism and other "modern" cultural expressions were difficult to mold to prehistory. Historical archaeologists have had considerably more success with the theory, but have found the greatest benefit in using some modified form of it. Much of the reformulation of the theory has the character of network theory, an apparently more robust set of concepts and approaches more suitable to archaeological research.

The future of world-systems theory in historical archaeology remains largely unresolved. Many archaeologists undoubtedly will continue to ignore it, favoring more ideational forms of analysis, but others surely will continue to explore its applicability to the archaeology of the modern world. The greatest potential for world-systems theory in historical archaeology appears to lie in the exploration of the socio-spatial relations between men and women who lived within the capitalist world-economy, or what I have elsewhere termed the "modern world." Studies of this nature will be challenging to create and difficult to present because, by their very nature, they must be detailed and broad at the same time. The use of network models in conjunction with selected concepts from world-systems theory offers abundant research potential for historical archaeologists. In any case, it has yet to be demonstrated conclusively that the theories have no place in the discipline.

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Wholes, Halves, and Vacant Quarters: Ethnohistory and the Historical Method

Paul R. Picha

Introduction

At regular intervals since 1972, ethnohistory has been treated in the *Annual Review of Anthropology* (Carmack, 1972; Krech, 1991; Spores, 1980). It is particularly relevant for historical archaeology if one accepts Wood's (1990:81) definition of ethnohistory as "the use of historical documents and historical method in anthropological research." Ethnohistory is in many ways essential to historical archaeological practice, as it provides the methods for critically analyzing and synthesizing documentary sources used by historical archaeologists, whether complementary or contradictory to the archaeological findings. "Text-aided" archaeology (Little 1992) has many practitioners who research topics from many time periods.

Ethnohistory in the last decade signals important changes paralleled within anthropology and history. As Wylie has observed (1996:255), "history is rewritten each [academic] generation." Ethnohistory continues to expand, while underscoring the importance of the underlying tenets of the enterprise—historical method. As considered here, ethnohistory draws upon the disciplines of cartography, geography, linguistics, ethnology, cognition/perception, archaeology, and history, while using a combination of the scientific method and the historical method (Fig. 1) and the lens of anthropology.

The increasing importance of the archaeological record, in conjunction with historical documents, witnesses a significant reemergence of method and data in archaeology (particularly historical archaeology) and ethnohistory (Feinman, 1997; Nassaney and Johnson, 2000). Papers in ethnohistory since 1990 also show attention to archaeology and cognitive/perceptual analyses. This discussion will use two examples from northern Great Plains ethnohistory to make observations on method, theory, foundations, interdisciplinarity, and continuities among researchers in observations and concerns over time in northern Great Plains ethnohistory, with suggestions for future research directions. Despite this emphasis on the ethnohistory of the North American Great Plains region, this chapter has materials of interest to historical archaeologists working elsewhere in North America, and for that matter, the world.

Interdisciplinary scholars, such as ethnohistorians, must retain the context of the findings and methods they borrow from other fields while applying these methods and findings to new research questions and analyses. Ethnohistorical analysis and research, while following precepts of the underpinning method and theory, necessarily also is an interpretive—and thereby, personal—exercise. Ethnohistorians and researchers in other fields of interest to ethnohistorians have been framing their research and drawing upon methods and findings in an ever-widening circle of specialized topics. With increasing sophistication of question framing and analysis comes a need for multidimensional investigation. Table 1 shows the variety of topics considered by ethnohistorians and of interest in northern Great Plains ethnohistory since about 1990. The two ethnohistory examples used here will show how later researchers may revisit and reinterpret

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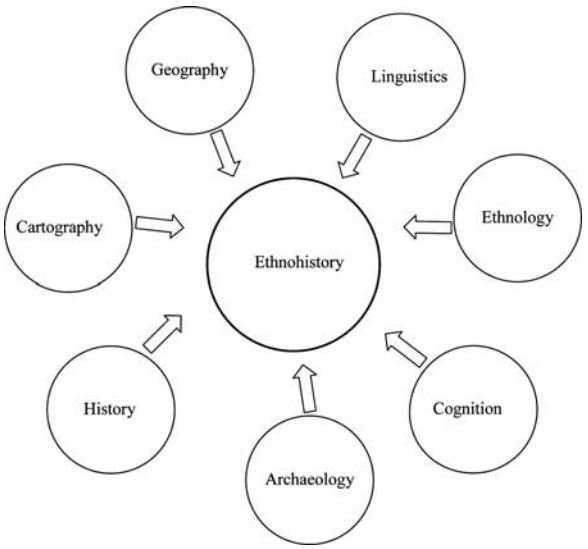

Fig. 1 Components of ethnohistory

earlier findings using added dimensions from different question-framing strategies as applied to the intersection of historical, anthropological, and scientific method that is ethnohistory.

The title of this chapter conveys the multidimensional and interdisciplinary tensions tugging at today's ethnohistory. Ethnohistory is, and remains, an interpretive and explanatory exercise. Burke (1992) and Windschuttle (1997) provide overviews of the diversity in content, method, interpretation, and explanation that exists in historical writing. Similarly, within archaeology, this diversity has been voiced by O'Brien et al. (2005) and Feinman (1997) for its science–history dichotomy. This overview examines some of these tensions and outlines responses and advances in ethnohistory in the last decade.

Ethnohistory

Implicit in Wood's (1990:81) definition of the field (see above) is the tenet that method, in addition to evidence, forms the core of ethnohistory as a research strategy (DeMallie and Ewers, 2001; Krech, 1991; Rogers and Wilson, 1993; Wedel and DeMallie, 1980). Ethnohistory has remained broad and multifaceted in content and problem orientation and in using interdisciplinary methods from history, anthropology, and archaeology. Problem orientation often draws as much from history as from anthropology (DeMallie and Ewers, 2001; Fischer, 1970).

Historical Method

Shafer (1980:40–43) and Wood (1990:84–92), among others (Windschuttle, 1997:219–221), describe the historical method. It shares common elements with the

Table 1 Selected Recent Research of Interest in Northern Great Plains Ethnohistory

Topic	References
Ethnogenesis	Bakker 1997; Foster 1996; Galloway 1995; Hill 1996; Moore 1987; Wood 2002
Culture history	Bakker 1997; Emberling 1997; Ewers 1997; Fox 1988; Gibbon 2003; Lyman et al. 1997; Picha 1996
Cartography	Birk 1992; Black 1997; Edney 1999; Fox 1988; Konvitz 1987; Lewis 1998; Picha 1993, 1996; Wood 1993b, 1996, 2003; Woodward 1998
Archaeology	Bernardini 2005; Brumfiel 1996; Cusick 1998; Fox 1988; Gibbon 2003; Hill 1994; Mason 1997; Robb 1998; Rogers and Wilson 1993
Historical archaeology	Feinman 1997; Little 1997; Purser 1992; Wood 1993a; Wylie 1996; Yentsch and Beaudry 1992
Oral history	Bernardini 2005; Purser 1992; Sekaquaptewa and Washburn 2004; Vansina 1992
Cognitive/ perceptual	Crowe 2004; Hill 1994; Lakoff and Johnson 2003; Robb 1998; Sekaquaptewa and Washburn 2004; Washburn 1999, 2004; Washburn and Crowe 2004
Fur trade relations	Calloway 2003; Gibson 1997; Thiessen 1993
Exploration	Allen 1997a, 1997b, 1997c; Calloway 2003; Galloway 1997; Ponko 1997; Ronda 2003; Wood 1993b, 2003
Linguistics	Bakker 1997; Campbell 1997; Drechel 1997; Foster 1996; Hill 2004; Mithun 1999
Place names	Afable and Beeler 1996; Birk 1992; Nelson 1997
Epidemiology	Alchon 2003; Barnes 2005; Scott and Duncan 1998; Trimble 1994; Verano and Ubelaker 1992

Note: Selected work from non-Plains regions was included when, in the author's judgment, the method and analysis could be adapted to concerns in Plains historical archaeology and ethnohistory.

scientific method as outlined by Lustrucci (1963:109) and Schumm (1991:18–27) and involves the following:

1. Problem formulation and document search;
2. External criticism—document authenticity;
3. Internal criticism—credibility of details from a document;
4. Independent lines of evidence—details and interpretations supported by information from different sources; and
5. Reliable information transferred to narrative that is refined and defensible.

The strengths of historical method are numerous. First, the initial formulation requires that the problem be addressed in terms that permit its testing in operationalized terms (Fischer, 1970:3–39). I follow Feinman (1997) in suggesting that false dichotomies have been established between archaeology as science and archaeology as history. It is not an "either/or" situation but rather an "and" complementary combination, where method complements problem formulation. Fischer's (1970) classic work seems either to have been overlooked or forgotten by many practitioners in the field of ethnohistory.

Nicollet and Densmore Case Studies

Two examples from the North American Great Plains are used here to illustrate the role of ethnohistory and the complementary nature of historical documents and archaeological data in addressing research questions: (1) Nicollet's 1839 expedition and Hydrographical Basin map and report and (2) Densmore's studies on Mandan and Hidatsa music and thoughts on her work as an early ethnomusicologist, coupled with Catlin's and Bowers's research on the Mandans and Hidatsas, particularly with reference to the Mandan O-kee-pa ceremony. More examples abound in ethnohistorical research, e.g., Fox (1988), Picha (1996), Wood (1993a, 1993b, 1996, 2002, 2003), and Bernardini (2005).

Independent Lines of Evidence

The general and the particular are often viewed as polar and dichotomous extremes when, in fact, skillfully employing both is essential to historical research. One kind of particularity is external and internal criticism of individual documents examined. From these particulars, the general is built, by using independent lines of evidence to build and bolster interpretations and inferences from the record. The general is the whole, defensible narrative.

James Hill (1994) has suggested that archaeologists use two different methods—"Established Generalization Testing method" (EGT) and "Tight Local Analogy method" (TLA)—to ensure testability and defensibility. Ethnohistorians, too, test their whole defensible narratives in part on external and internal criticism of the particulars, the documents and details summoned in fashioning the narrative.

Joseph N. Nicollet as Enlightenment Ethnohistorian

Joseph N. Nicollet's 1838 and 1839 expeditions under the auspices of the U.S. Army Corps of Topographical Engineers resulted in the 1843 cartographic masterpiece, the Hydrographical Basin map (Nicollet, 1843), and a Senate report. James Ronda (2003:27–28) said of the Corps' principal figures, "[Colonel John J.] Abert and [Secretary of War Joel R.] Poinsett were not only bureaucratic allies—they also shared a common view about the nature of western exploration. That such exploration should put science in the service of empire was plain enough."

As DeMallie and others (DeMallie and Ewers, 2001:26) have suggested, northern Great Plains ethnohistory was an outgrowth of the expeditions of Catlin in 1832, Maximilian-Bodmer in 1833–1834, and Nicollet in 1838–1839. Of the explorer-chronicler triumvirate, Nicollet is surely the one whose contributions are least known (cf. Catlin, 1967; Porter, 2002). In my opinion, Nicollet's work lays the foundation for northern plains ethnohistory. Nicollet's ethnohistory was grounded in the French scientific tradition of Laplace, informed by the geological principles articulated in England by Lyell, and based in the German geographic tradition of Humboldt. As with Humboldt, Nicollet aimed toward synthesis of knowledge.

David Hackett Fischer (1970:38–39) asserts that question framing may be as important in [ethno]-historical research as the result. The products of Nicollet's 1838 and 1839 expeditions show the importance of question framing. Nicollet framed his task as a holistic one, to depict the hydrographic basin in a map and report cumulated from diverse lines of evidence.

Joseph Nicolas Nicollet and His Contemporaries

Figure 2 names some of Nicollet's mentors and colleagues, and it shows that his influences were drawn from international circles in science and government. In addition to his correspondence with Humboldt and Laplace, Bray (1970b:242–244, 1980:35–36) documents that Nicollet maintained contact with other scholars such as the Belgian Adolphe Quetelet—the future father of statistics and "social physics."

Nicollet's astronomic and cartographic training in France mirrored that of his mentor, Pierre-Simon de Laplace. Gillispie's (1980:84–91, 2004) review of French science of the Enlightenment and Romantic eras chronicles the ascent of the quantitative approach over the qualitative and places Laplace at the center of French Enlightenment science as the

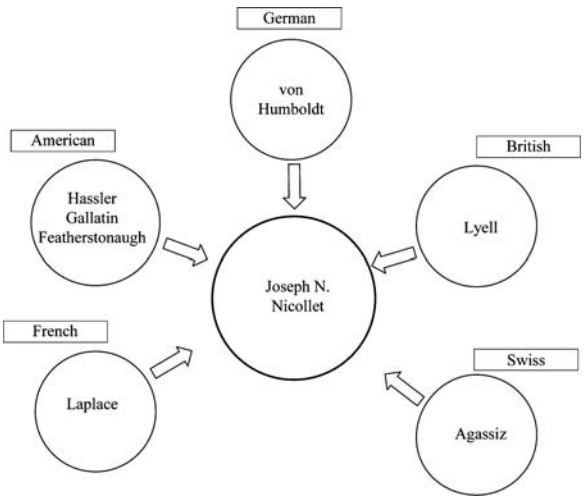

Fig. 2 J.N. Nicollet and the nineteenth-century scientific world

embodiment of exactness. The core of Laplace's method—precise measurement—carried great weight whether reflected in Nicollet's pursuits in astronomy, cartography, or ethnology. As Ponko (1997:342) has characterized this measurement-centered method: "Nicollet began his surveys from a carefully selected departure point and immersed himself in intricate work involving thousands of astronomical observations and other topographical data for the preparation of maps. He also used the barometer for the measurement of altitude."

Key among Nicollet's influences was Alexander von Humboldt. Godlewska (1999a:239) observed about Humboldt, "It is my contention that in his scientific graphics he was trying to develop or adapt from the work of others a language—or a way of seeing—that would encourage both conceptual depth and rigor and holistic vision." Similarly, Nicollet's cartography presented a holistic, rigorous scientific understanding of hydrology, topography, ethnology, and history. What Humboldt did for the natural sciences in Europe, Nicollet emulated in his cartography in North America. Bray (1980:46) reported that Nicollet aimed to add "to the progressive increase of knowledge in the physical geography of North America."

Late-eighteenth-century geographic vocabulary emphasized precision in defining terms and focused the cartographer's task on mapping the drainage basin (Godlewska, 1999b:42–45; Konvitz, 1987:84–85; Rudwick, 1997:133–56, Fig. 17, 2005:474–484, Fig. 9.1). In French, the key term is *partage des eaux*—the division between two water basins. Nicollet's cartographic background is reflected in what is depicted in the maps and how the particulars were incorporated. Nicollet combined depicting drainage basins (hydrology) with hachuring, or using hash symbols to depict contours of land masses (topography) (Friis, 1970:Fig. 12). Livingstone and Withers (1999:123) pose the relations in Enlightenment geography "As the meeting point between theory and practice, history and geography, the explorer and the aboriginal, the ontological and the epistemological, the archive and the field, mapping emerges as one crucial element in the evolution of Enlightenment thinking."

On the geographer Humboldt's influence in scientific circles, Godlewska (1999b:126; also see Helferich, 2004) notes, "In an era in which

description unlinked to either empirical research or theory had ceased to find favor, Humboldt sought to reintegrate description, empirical work, and theory about the cosmos." Humboldt put it simply: "Everything is related." But Humboldt did more than that: he achieved integration and synthesis of natural and cultural realms. Humboldt's achievements were exemplified by his graphic additions—isothermal lines and landform cross-sections—that nineteenth-century scientists drew upon, including Nicollet.

Nicollet referred to Humboldt as "the Nestor of scientific travellers" in his congressional report (Bray, 1970b:3). The geographic influence of Humboldt permeates the writings and cartography of Nicollet. Geologic cross-sections along the Missouri and other annotations on the manuscript maps of the 1839 expedition provide evidence in support of this claim (Wood, 1993b:Plates 43, 52, 59, 61). Prior to 1831 Nicollet was undoubtedly aware of Humboldt's work, perhaps as early as 1808, when Humboldt returned to Paris to work on his monographs, and certainly later as Humboldt's monographs neared publication.

Not a Nicollet mentor but an influence was Louis Agassiz, whose scientific stature continued to rise during Nicollet's lifetime. Nicollet had referred to Agassiz's glacial studies and offered alternative scenarios (Bray, 1970a).

Lyell's influence on Nicollet may be traced through publication, if not communication. English scientist Charles Lyell's three-volume *Principles of Geology* (1830–1833; reprinted in 1990) provided a synthesis of vulcanism in geological thought and was among the works in Nicollet's library (Bray, 1970b:242–244). Lyell's glossary includes the Basin of Paris but lacks the conceptual or analytical rigor that Nicollet applied to the hydrographic basin.

The context of Nicollet's scientific contributions paralleled that of Humboldt. Both men's careers encompassed Enlightenment positivism and the Romantic era onset in Europe and America. Richards (2002:520–521) proposes that the German Romantic tradition includes the mid-nineteenth-century writings of Humboldt, his *Cosmos* in particular.

Natural and social science circles in America were small in the first decade of the nineteenth century. By the late 1830s, scientific circles were expanding, but the natural and social sciences remained a small cadre of well-informed and knowledgeable participants. Shortly after arriving in America in early 1832, Nicollet was introduced to Ferdinand Rudolph Hassler, superintendent of the U.S. Coastal Survey in Washington. Aided by Hassler's network of Washington political and natural science connections, Nicollet in 1838 became affiliated with the U.S. Army Corps of Topographical Engineers. Through this affiliation, Nicollet was to embark on a remarkable journey through the Southeast, Midwest, and Northern Plains that would consume the remainder of his too-short life.

American ethnologists include Nicollet's American scientific acquaintance, Albert Gallatin (Bieder, 1986:16–54). Foremost in carrying out the American scientific tradition of the early-nineteenth century, Gallatin was better known as secretary of the treasury in President Thomas Jefferson's administration. The Swiss-born linguist and ethnologist founded the American Ethnological Society in 1842. Gallatin's 1836 "Map of Indian Tribes of North America" proved influential—although aspects of its northeastern Plains cartography were superseded by Nicollet's masterpiece (Bieder, 1986:16–17, 31–33). Gallatin's classification of American Indian languages and the customs of the peoples who spoke them foreshadows the work of anthropologist Lewis Henry Morgan.

Nicollet's natural science contacts in America included geologist George W. Featherstonhaugh. The sum of geologic, geographic, and cartographic knowledge of the northeastern Great Plains prior to 1838 can be gleaned from Keating (1959) and from Featherstonhaugh (1836:153–155; Friis, 1970:124). As Featherstonhaugh (1836:13) recommended in his 1836 Congressional Report:

> A geological map of the whole United States, where all the formations would be exhibited on a large scale, and the most important deposites of fuel, metals, and useful minerals be accurately be laid down, would be a monument both useful and honorable to the country at home and abroad, and I trust the day is not distant when Congress will direct such a map to be constructed upon a scale commensurate with the importance of the undertaking.

Nicollet's hydrographic work under the Topographical Engineers was indeed part of the cumulative efforts urged by Featherstonhaugh.

Nicollet's Legacy

Nicollet's legacy to northeastern Plains ethnohistory entails much more than the few place names in the modern-day states of Minnesota and North Dakota that either bear his moniker or imprint. Relations between humans and their environment rested at this interface—the Humboldtian tradition—later spelled out in *Aspects of Nature* (Humboldt, 1849). Nicollet's work in Great Plains cartography and geography garnered sincere acknowledgment by Humboldt in *Aspects*.

Enlightenment and Romanticism

America in the 1830s was in a state of flux among competing "isms": capitalism, expansionism, Jacksonianism, and romanticism. Nicollet was steeped in Enlightenment methods of science, yet influenced by Romanticism. Ever exact and precise, Nicollet at times delved into romantic descriptions of the prairie and the forest and its peoples in his journal writings (Bray, 1980:240–241).

Reconnaissance, Mapping, and Archive

In American geography and cartography, Nicollet's application of the "hydrographic basin" is a revolutionary concept. French mapping of the early nineteenth century had applied hydrographic analysis to the "Paris Basin" (Gillispie, 1980, 2004; Gillispie et al., 1997). What Nicollet did with the hydrographic basin was comprehensive and, indeed, holistic. Ponko (1997:342) observed of Nicollet's 1839 expedition: "As they passed the divide between the Missouri and the James River, Nicollet began thinking of the entire region as not just a land of hills and valleys but as a "basin" within which all the water ultimately flowed to a single outlet—the Gulf of Mexico via the Mississippi River." John C. Frémont—the Pathfinder, Nicollet's assistant and protégé—applied the concept of the hydrographic basin on a grand scale to his mapping and explorations of the "Great Basin" in the 1840s. Matthew Edney (1999:165) has reflected on Enlightenment "reconnaissance, mapping, and archive" in the following terms:

> Enlightenment map making—which might more properly be referred to as "mathematical cosmography"—lay at the core of geographical representation and, indeed, served to epitomize Enlightenment encyclopedism. Specifically, geographical knowledge was idealized as constituting a comprehensive *archive*, constructed through the geographic practices of *reconnaissance* and *mapping* [emphasis in original].

Place Names, Cartography, and Anthropogeography of Place

Place names and their etymology remained the focus of Nicollet's scientific graphics: "In general, I recognize everywhere that the names of places in this region, those which the French gave them and those which the Americans translate from the French are all from the original Indian and are only the translation of savage names in two modern languages" (Bray, 1969:36).

In the same vein, Nicollet wrote, "It is of great interest in the history of Geography to conserve the relationship of these names, retain their etymology and their useful names" (Bray, 1969:36). William H. Keating (1959:II:33) echoed these sentiments in his narrative of the Long Expedition: "It is to be regretted that the practice of retaining the Indian appellations has not been more generally adopted by travellers [sic]; they have rejected the melodious and original names, to substitute others less pleasant to the ear, and worn out by the frequent use, not only on this, but also on the other side of the Atlantic." It is conjectured that Nicollet's musical aptitude played into his linguistic skills as a faithful transcriber of American Indian languages he encountered in his plains expeditions. Seventy years later, Frances Densmore used her musical aptitude to expand knowledge of Mandan and Hidatsa music—the second case study discussed.

Ethnohistorical Contributions of the 1839 Nicollet Expedition

Several examples serve to characterize the complexities and contributions of Nicollet's cartography and ethnohistory. Nicollet's ethnohistorical contributions draw upon these primary sources—oral

traditions, journals, field notes, manuscripts, and early printed maps—emanating from separate lines of evidence, capable of internal and external criticism. Additional sources and interdisciplinary insights will be used in revisiting and reinterpreting examples from Nicollet's map.

The expedition left St. Louis, Missouri, on April 4, 1839, aboard the steamboat *Antelope*. The goal was to ascend the Missouri as far as the American Fur Company post at Fort Union. Reconnaissance and mapping were to include the vast region to the Missouri Coteau and Coteau des Prairies—the eastern two-thirds of the modern-day state of North Dakota. The 1839 expedition's ascent was slowed by low springtime water and snag obstructions. Hopelessly delayed, the point of initial departure for overland reconnaissance was changed to Fort Union's downriver sister post, Fort Pierre—in northern modern-day South Dakota.

Among the expedition members were several individuals with extensive guiding experience and at least bilingual interpretive skills in the northeastern Plains. These include Étienne Provost, Luison Frenière, William (Dickson) Dixon, and Pierre Dorian. Many place names on the hydrographic map undoubtedly derive from information garnered from conversations with and observations of Native peoples the Nicollet party encountered. G. Hubert Smith (1977:70) observed some 50 years ago, "Dialectial forms of place names sometimes reveal, as in Nicollet's evidence, traditional claimants to particular streams, valleys, and other physiographic areas and landmarks."

Rivière à Jacques and the James River Valley

Nicollet's travels through the James River Valley of modern-day North Dakota provide written and cartographic records of significant detail that render Featherstonhaugh's 1836 observations pale in comparison. The James Valley's physical setting comprises an entrenched, meandering, and heavily timbered stream that is backed by elevated uplands, just as Nicollet described. One of the stream's names in Dakota—Tschan-sansan or cream-colored tree—refers to the abundance of this critical but often uncommon resource in prairie ecosystems. In other writings and winter-count documents, the watercourse is known as the Dakota River for the Yanktonai Dakotas that settled along it (Picha, 1993:95, 1996:13, 44–45, 54–56).

Sheyenne Valley and the Salt Water Region

Nicollet continued to the northeast along stretches of the Sheyenne Valley on his trek to Mini Wakan or Devils Lake. Nicollet's composite manuscript maps of the Sheyenne Valley bear several annotations that are worthy of discussion.

One place name, Okiedan Buttes, is of interest because as a landmark it has a history. Nicollet, unfortunately, does not discuss the place or the origin of the name, not in annotations on his map or in his report or journal. Okiedan or Okiedan Buttes only appear on the final manuscript map and on the published Hydrographical Basin map. DeMallie (personal communication, 2002) believed the place name could derive from the Yanktonai Dakota *okiye* "to help" or *okhiye* "to talk, make peace with," and he was inclined to favor the latter as a proper place name—Peace Buttes.

Louis Garcia (DeMaillie, personal communication, 2002) suggested that Okiedan was a transcription error of the Yanktonai word, *okicize*, and that the appellation refers to the location of an 1836 battle between the Yanktonai Dakotas under Waneta [or Wahanantan] and a Mandan–Hidatsa war party under Wounded Face. Jeffrey Hanson (1983) has described this mortal confrontation.

I tend to side with DeMallie's interpretation, and Nicollet's journal entry of July 21, 1839 (Bray and Bray, 1976:177), may be of relevance: "Camp on Spring Creek, 3 miles from the junction of the Sheyenne. Send a message of peace to the camp of *Wahanantan* and *La Terre qui brulé*, and announce my arrival." The matter must remain unresolved, given that we do not have Nicollet's original transcription or his translation of the place name.

Three days later, on July 24, 1839, Nicollet recounted in his journal along Bald Hill Creek near the Sheyenne River confluence (Bray and Bray, 1976:181): "Here the bald hills are remarkable. They resemble Indian mounds made by the hand of man." Bald Hill Mounds and the Biesterfeldt archaeological site—*ancien village des Chayennes,* as recorded by Nicollet—are known by

archaeologists (Wood, 1993b:Plate 75A). Other undocumented oral traditions that appear as annotations on Nicollet's manuscript maps await investigation and treatment by historians and archaeologists.

Commemorating acquaintances, colleagues, and Native peoples, and accurately capturing hydrology and topography on the 1843 Hydrographical Basin map match the best science and practice of the time. Nicollet's practice of transcribing place names used by Native peoples has been recounted. Other place names on the map commemorate people known to expedition members. In North Dakota, Lake Jessie—named for Jessie Benton, John C. Frémont's fiancée and future wife—appears on the map. In South Dakota, the Topographical Engineers' leadership is represented in Lakes Abert and Poinsett, the former corrupted to Lake Albert.

Summary of Nicollet's Contributions to Ethnohistory and Ethnohistorical Method

The ethnohistory of northeastern Great Plains peoples received initial treatment in the prolific but under-recognized contributions of Joseph Nicollet, who can be counted among the first generation of northeastern Plains ethnohistorians. His northeastern Plains maps and the landscapes he depicted retain the imprint of the peoples who named and used them. Place names on nineteenth-century manuscript maps and documents serve as a conduit linking the Native American world with the one reinvented by Euroamericans of the same period. Joseph N. Nicollet was an enlightened and revolutionary investigator; his work is encyclopedic in scope. Few investigations have produced the wealth of ethnohistoric information that Nicollet's did.

Frances Densmore as Cognitive Investigator

The study of traditional music, ethnohistory, and culture history shares common methods and foundations, as Frances Densmore demonstrated in her six-decade career. Revisiting Densmore's publications on Native American music and her thoughts about her work provides the opportunity to acknowledge her now largely overlooked or forgotten contributions. Comparing Densmore's field recordings, song analysis, and thoughts about her work with Alfred Bowers' and George Catlin's works on the Mandans and Hidatsas reveals parallel findings on symbolic metaphor as embodied in Mandan and Hidatsa music and ceremony, as transferred to material culture, and as may be encountered tangibly in the archaeological record (DeBoer, 1991). Catlin's (1967) O-kee-pa narrative from the 1830s and Alfred Bowers' (1950, 1965) texts on *Mandan* and *Hidatsa Social and Ceremonial Organization* bracket Densmore's work.

Frances Densmore as Musicologist

Ethnomusicology is often relegated to the purview of folklore, or it is pigeonholed somewhere among three subject approaches that Neil Judd (1967:4) identified as those that the Bureau of American Ethnology (BAE) studies embraced—Philology, Mythology, and Habits and Customs. Aptly, Bruno Nettl (1983:252) captured the essence, "The History of Ethnomusicology is the history of Fieldwork." Frances Densmore's career epitomized that essence. But, as she observed, "there is more to the preservation of Indian songs than winding the phonograph" (Hofmann, 1968:v).

Densmore undertook her fieldwork among the Mandans and Hidatsas on the Fort Berthold Indian Reservation in 1912, 1915, and 1918. Bowers's fieldwork among descendants of the same people began in 1930, and his investigations resulted in two classic treatments of Mandan and Hidatsa social and ceremonial organization (Bowers, 1950, 1965).

The State Historical Society of North Dakota (SHSND) supported Densmore's first season. She used BAE equipment and contacts supplied her by the SHSND. Densmore's relationship with the SHSND Secretary, Orin G. Libby, might best be characterized as tentative and professional. Archival inquiry reveals that correspondence occurred intermittently during the 11-year interval between the initiation of fieldwork and the 1923 publication of *Mandan and Hidatsa Music* (Densmore, 1923).

Primary documentation (Libby, n.d., Box 10, Folder 6; Box 28, Folder 7) suggests that BAE-SHSND relations were strained on occasion—largely as a result of publication giving more credit to the BAE than to the SHSND, and the BAE retaining ownership of Densmore's recordings.

Densmore's theoretical orientation included a cognitive component, as (Hofmann, 1968:62) noted in an October 20, 1943, letter, "In regard archaeology vs. ethnology: Long ago I invented the phrase 'archaeology of the mind.' The idea was that my work was digging down into the *minds* of old Indians, going through one layer after another until I got to what they remembered of the oldest traditions."

Culture History

The operational definition of *culture history* used here combines Jan Vansina's *culture* with Bruno Nettl's *history*. Of culture, Vansina (1992:5) observes:

> People can act only on the basis of their cognitive reality, not on the basis of physical reality itself; cognitive reality is culture. ... Moreover, cognitive reality always includes features for which there is no physical counterpart. The cognitive landscape of peoples in the rain forests [I interject Plains] encompasses the abode of spirits. ... Cognitive reality is not a selection of features drawn from the physical habitat; rather, it is totally congruent with the physical world as the whole world.

Densmore's remarks about archaeology of mind certainly show awareness of and concern to know the cognitive realities of her cultural informants.

Bruno Nettl (1983:193) defines (ethnomusical) history as a series of types of transmission:

> Beginning with the microcosm, the piece and its history, let me propose that there are types of histories, four kinds of things that a piece, once composed, may experience. In Type I it may be carried without change, more or less intact. In Type II it may be transmitted and changed, but only in a single version or one direction, so that it continues differently from the original but without the proliferation of variants. In Type III it may experience the kind of transmission that produces many variants, some of them eventually abandoned and forgotten, others becoming stable once differentiated, others again changing constantly. In all three of these types the history of the composition is essentially self-contained, all forms derived specifically from the original creation. A fourth type is similar to type III, developing within the family principle but borrowing material from other, unrelated composition.

Densmore characterized her work as "study of Indian music" (Hofmann, 1968:62), insisting that "Music is a human expression, originating in a mental concept, and is not the product of *laws*. My effort has been to present music from the standpoint of the Indian, with such comparisons to our music as would aid our approach to it, but the origin has, in all the important old songs, been the 'dream.'" Densmore's interest first was in recording the oldest, most traditional songs. Among the Mandan and Hidatsa, she noted in successive field seasons that singers, both male and female, of personal songs at times changed lyrics to reflect events or changes of mood and outlook that had affected them. Densmore appears to have dealt regularly in her fieldwork both with "the dream" or with types of cognitive reality, and with several types of traditional songs that informants brought to her.

Densmore plumbed her subjects' cognitive realities and recorded several of the types of histories that Nettl proposed. Densmore also was interested in symbolism embodied in musical instruments such as the drum and the drumstick. She noted the faint but still visible goose tracks painted on the Goose Society drum she collected. Other comments Densmore made about her fieldwork with Indian tribes whose songs she collected indicate Densmore's awareness of use of symbols to convey song and ceremony.

Ethnohistory of Symbolic Metaphor

The relevance of symbolic metaphor to music and to material and cognitive culture has its roots firmly planted in Boasian anthropology. Recent attempts have focused on conjoining metaphor and plane symmetry as sources for framing testable hypotheses in the ethnographic and archaeological records of the American Southwest (e.g., Washburn, 1999, 2004; Washburn and Crowe, 2004). Robb (1998:342) has observed, "Symbolism of colors, textures, forms, and compositional styles may be the link between social relations, semantics, and artifact variation."

Metaphor is at the center of Native American musical and ceremonial traditions, as Washburn and colleagues (1999; Sekaquaptewa and Washburn, 2004) assert. Catlin (1967) asserted

that the Mandans' O-kee-pa ceremony embodied metaphoric symbolism; and several metaphoric features of the ceremony are explored here.

Particular attention in future investigations should focus on the role of dualities and dichotomies as cognitive symbols that may crosscut media in the Plains Village archaeological record (VanPool and VanPool, 2002). Plane symmetry and its variants have been classified in a number of ways by Crowe (2004). Recently, Whiteley (2004) has raised additional important points about Puebloan social organization (moieties and clans) and its importance in human terms—and possible tangible expressions in the archaeological record of the American Southwest.

Just as Alexander Henry, Maximilian-Bodmer, and Lewis Henry Morgan missed arriving at the Mandans' and Hidatsas' villages in time for the O-kee-pa ceremony, so did Densmore for the Ute's Sun Dance. With the Utes, a group who expressed hostility to her collecting efforts, she still was able to collect song from them, and she was given information about the by-then-prohibited Sun Dance. But Densmore was successful more often than not in recording ceremonies central to the Indians she visited. She was able to record Corn Priest and Goose Society songs—some of the oldest Mandan songs central to their identity as a people. Harrod (1995:117, Note 2) has observed, following Bowers, "The songs of the Okipa ritual memorialized, in historical order from ancient to more recent, the names and locations of past Mandan villages on the Missouri River between the Knife and Grand Rivers." Catlin did not record the songs, and neither Densmore nor Bowers were able to obtain them from informants, as the ceremony was last performed in 1889 or 1890.

Importantly, Densmore built on her earlier work among the Chippewa in recognizing cognitive aspects of Native American song and symbol: "An old woman, member of the [Chippewa] Grand Medicine Society, sang one of its songs and drew the picture by which such songs are identified. Later I showed it to a member of the Society at White Earth who recognized it and sang the same melody" (Hofmann, 1968:23).

Densmore recognized use of traditional symbols in a drawing as representation of a song of a long-standing ceremony of a society among a Native American group. For her, connections between song and symbol were immediate and part of what she and her informants experienced in communication of song.

Among the Mandans, dualities of color symbolism and metaphor and their significance remain little studied. Densmore (1923:38) and Bowers (1965:488) reported on color dualities in regard to "redstone" domestic and wood ceremonial pipes. As elaborated by Bowers, and as shown in Catlin's O-kee-pa renderings, these color dualities are thought to include (1) yellow–black, (2) red–brown, and (3) other variants red–black–white, black–white, red–white.

I wish to pose two questions and provide possible answers to them that derive from consideration of color and symbolic metaphor expressed in the Mandan O-kee-pa ceremony. First, what is the function of the triangular or V-shaped bastion-like (wooden) structures depicted along the palisade in both Bodmer's 1834 painting and Prince Maximilian's map of the Mandan Village at Fort Clark (Wood, 1993a) that have vexed archaeologists and ethnohistorians? May these V-shaped constructions be temporary visible markers or symbols to the passersby that the Mandan O-kee-pa ceremony is commencing or in progress? Similar motifs of concentric circles bordered by triangular projections are depicted at the hip and shoulder of the Buffalo Dancer as depicted in Catlin's (1967) O-kee-pa. Alfred Bowers (1950:159), in his informant interview with Wolf Chief, suggests a natural source for the O-kee-pa buffalo [bison] bull dancer designs, "They painted him on the chest, legs, and arms with red, black, and white. All this was representative of this bug in color [... the worm on the chokecherry bushes]." The eastern tent caterpillar *(Malacosoma americanum)* is the taxonomic candidate that matches the coloration and markings depicted.

Second, what is the source of the "yellow dirt" mentioned by Catlin (1967:60–61) and used in the O-kee-pa ceremony to discolor and disarm the power of the black-painted evil one? At the Mandan Village at Fort Clark, yellow subsoil was exposed along a high vertical cutbank. Yellow subsoil also would have been exposed in areas where topsoil had been removed. Catlin's painting of the village illustrates exposed yellow subsoil in the village plaza. Traditional cultural preferences may be informative about the symbolic and cognitive connotations and about the duality expressed between the yellow earth (subsoil) and black (topsoil). Color dualities are worthy of further investigation in the Plains Village archaeological record.

Summation of Densmore's Contributions to Ethnohistorical Method and Investigation

Two conclusions are drawn about Densmore's ethnohistorical work and contributions. One, Frances Densmore can be counted among the pioneers of Mandan and Hidatsa culture history. It is time to add her to the roster of innovative formative American anthropologists and ethnohistorians. Two, symbol and metaphor are central to Native peoples and are expressed linguistically and ceremonially. As Alfred Bowers (1950:viii) said of the Mandans, "behavior was traditional and stemmed from institutional sources, the sacred rites, and ceremonies."

Symbol and metaphor need to be reintroduced to the question framing and investigative reservoir tapped by Northern Plains archaeologists and ethnohistorians. Analysis needs to begin with the meaning and importance the cultural group assigns its symbols and metaphors. As Washburn (1999:558, Note 3) foresees, "I predict that the specific geometry used to metaphorically visualize cultural perpetuation will differ among cultures depending on the different ways cultural groups conceptualize essential life processes and relationships." Informants' (and investigators') cognitive realities and autobiographical memory of symbol and metaphor need to be taken into account as we carry on as anthropological archaeologists.

Future Directions

Ethnohistory is guided by the research questions posed, the supporting evidence marshaled, and the data generated—scientific method. It culminates in a defensible narrative—the historical method. Ethnohistorians have at their disposal the training and tools to investigate a host of topics relevant to a worldwide audience that few other disciplines do.

Wholes

Wolf's *Europe and the People without History* (1997) emphasizes articulating historical and holistic relations that involve people. Holistic investigation escapes the false dichotomy of viewing social and material relations as separate, rather than as inextricably tied. Culture history signaled an emphasis on history of peoples, just as recent investigations of ethnogenesis do (Galloway, 1995; Hill, 1996; Moore, 1987). The archaeological record may supply one of the independent lines of evidence that Olson (1959) enumerated nearly five decades ago and as later discussed by Lyman et al. (1997) and Nassaney and Johnson (2000).

Halves

Halves, by definition, imply equal and divisible parts of the whole. Ethnohistory offers the vehicle to draw together the parts—an integrative synthesis as narrative. The two case studies focus on contextualizing and integrating the investigator (Nicollet and Densmore) with the investigated (Hydrographical Basin map and Mandan and Hidatsa music). Revisiting and reinterpreting historic context using evidence and additional analysis is a cumulative exercise that results in fuller explanations to the questions posed.

Vacant Quarters

Using interdisciplinary and multidimensional precepts that comprise ethnohistory has been a call that often has fallen on deaf ears in both academic and public communities. Ethnohistorians may rectify absences of interdisciplinary and multidimensional approaches through their research. Narratives that address the context of human history in all its complexities are testaments to the contributions of ethnohistory. These narratives are particularly critical to the practice of historical archaeology.

Conclusion

Ethnohistory has expanded in scope in the last two decades. It includes an array of topics beyond the traditional ones of culture history and culture process (Nassaney and Johnson, 2000; Wood, 1990). The expanded scope includes ethnogenesis, cognitive/perceptual analyses, and other topics. Ethnohistory is guided by scientific and historical method. Tensions that pull at ethnohistory are no different than those in the history of science in the eighteenth- or twenty-first

century (Bowler and Morus, 2005; Cahan, 2003). As Taper and Lele (2004:534) assert, "Evidence is a summation of data in light of a model or models." Ethnohistoric research parallels and complements the method that guides it.

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Industrial Archaeology

Patrick E. Martin

Introduction

The Industrial Revolution is arguably one of the most important social phenomena responsible for shaping the modern world. Of course, some historians and economists have long contended that this was or was not a "revolution" in the strictest sense of the word and scholars still debate whether the use of this metaphor is problematic. Most writers agree that this was not an event, but rather a process, with predictable precursors and variable rates of change from place to place. While earlier shifts in productive organization and technological sophistication set the stage for the rise of manufacturing and all of its associated social dimensions, the changes in scale and intensity of productivity, settlement patterns, distribution, exchange, and control that characterize industrialized societies have had a profound and lasting impact on the way we live today. These forces have fundamentally shaped the scope and scale of the remains studied by historical archaeologists. To ignore or discount the central role of industrialization is to risk overlooking the obvious, if not to doom any attempt at understanding from the outset.

While most historical archaeologists would certainly agree with the general sentiments expressed above, the lack of focused attention on industrial matters within the practice of historical archaeology begs explanation. The literature of historical archaeology in English is not bulging with examples of the study of industry, industrial sites, industrial technologies, industrial societies, nor the process of industrialization. The archaeology of industry has not been a core thematic focus of historical archaeologists over the four decades' development of the field, but recently it is drawing increasing attention and interest. While other scholars have found industry a fertile field for study, mainstream archaeologists have come to it slowly. Any reader can examine the products of the Society for Historical Archaeology to evaluate this issue in a North American context, or the publications of the Society for Post-Medieval Archaeology (SPMA) for insight into the situation in the United Kingdom. If industrialization is so important, why have members of these two groups of archaeologists paid so little explicit attention to it, and why are they coming to it now? This chapter will examine the premises laid out above and attempt to explain the perceived lack of critical study, as well as some promising trends and prospects for the future. It will review important scholarship, institutions, and methods for the study of industrial archaeology (IA), embracing the global orientation of the volume by integrating case studies and examples from both North American and international contexts.

British Origins of Industrial Archaeology (IA)

The roots of IA as a formal practice are to be found in Britain, and are ably chronicled by Angus Buchanan in *Perspectives on Industrial Archaeology* (Cossons, 2000) as well as others. I will merely summarize some of the salient points. IA was

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practiced first in the context of continuing education courses for adults. Michael Rix, a historian at the University of Birmingham, used the term in 1955 when he wrote on the Industrial Revolution in Great Britain, pointing out the usefulness of the physical remains for understanding and appreciating the scope and scale of industrialization. The Council for British Archaeology acknowledged a growing interest in the topic when they established an Industrial Archaeology Research Committee in 1958 (Buchanan, 2000:20). Fieldwork, in the form of site documentation and some excavation, was practiced largely on an avocational basis by continuing education students. The academic home of the enterprise was tied more to English history or the history of technology rather than to archaeology in those days, but the field enjoyed some enthusiastic growth in the 1960s. A core development area was in the Bristol region, where the new University of Bath provided a base for Buchanan in the history of technology program, and the Bristol Industrial Archaeological Society (BIAS). BIAS was an activist organization, promoting the preservation of important industrial monuments, as well as a scholarly base, publishing numerous books and sponsoring several formative conferences (called the Bath Conferences) that led to the creation of the Association for Industrial Archaeology (AIA) in 1973.

The combination of scholarship and activism practiced by BIAS is typical of the IA scene in the United Kingdom. The AIA is an association in the strict sense, as it is made up of a group of affiliated societies and individuals, including many members of regional and thematic organizations who are primarily concerned with their specific interests, but band together around the common theme of heritage conservation.

Many citizens of the United Kingdom are intensely proud of their nation's role in fostering (or founding) global industrialization, and express this pride in a variety of ways, including the numerous regional, canal, railway, and other enthusiast organizations that affiliate with the AIA. During the 1960s this pride served to galvanize attention to the physical remnants of industrialization in the context of preservation battles to save beloved monuments, such as the Euston train station, demolished in 1962 (Buchanan, 2000:18).

In addition to writers like Buchanan, another very prolific contributor to the early IA literature was Kenneth Hudson. Apparently something of a polymath, Hudson studied and wrote in multiple interest areas, but left a large body of writing about IA that was very accessible and influential. Two pieces deserve particular attention: Hudson's *Industrial Archaeology, An Introduction* (1963) was widely distributed and his later *World Industrial Archaeology* (1979) particularly served to broaden the scope of inquiry and awareness of industrial heritage. Barrie Trinder, a professor and productive writer on the scene at the beginnings of the Ironbridge Gorge Museum, has also played an essential role in scholarship, education, and preservation in the United Kingdom. Among his many publications is the massive *Blackwell Encyclopedia of Industrial Archaeology* (1992), and a more recent piece that reflects his attention to more recent industrialization is *Twentieth Century Industrial Archaeology*, coauthored with Michael Stratton (Stratton and Trinder, 2000). Another influential writer who began to produce good scholarship during this critical formative period and remains very active is David Crossley, with excavation reports like his *Bewl Valley Ironworks* (1975) and significant IA content in his more general book *Post-Medieval Archaeology in Britain* (1990). Sir Neil Cossons has been in many ways the most influential IA scholar in the United Kingdom, from his formative role in the Ironbridge Gorge Museum, a stint as director of the Science Museum of London, and chairman of English Heritage. Cossons has been a staunch ally of industrial heritage preservation and an articulate spokesman for the cause, both to a professional audience and to the public (Cossons, 1975, 2000).

Early IA in the United States

Even before historical archaeology gained recognition or self-identification as a subdiscipline, archaeologists were examining industrial components of North American sites. As early as the 1930s, archaeologists with the U.S. National Park Service (NPS) encountered evidence of early American industry in their excavations at Jamestown (Cotter and Hudson, 1957). Those early excavations revealed

remains of activities, such as pottery and glass manufacture, brick and lime kilns, and even iron making. One could argue that these productive endeavors were practiced at a craft level in Jamestown, but they paralleled similar activities in England and certainly qualify as precursors to industry. The interesting point is that they were studied archaeologically.

Contact with British activities through individuals such as Smithsonian Curator Robert M. Vogel brought increased awareness of industrial heritage to the United States in the 1960s, a time when the historic preservation movement was enjoying a significant upswing. While industrial sites did not generally draw significant attention in the preservation battles of the day, they did rise in the sights of scholars and local activists who recognized their significance in historical terms and their vulnerability in the face of urban renewal throughout the country (Sande, 1976). Vogel not only visited British colleagues on their turf, but also brought speakers such as Kenneth Hudson to the United States in the 1960s, stimulating interest in the minds of a community of curators, architects, and archaeologists. Together with allies from the engineering community, especially the American Society of Civil Engineers, a new program, the Historic American Engineering Record (HAER), was created within the NPS in 1969 (DeLony, 1999). This led directly to an initial formal project for the new entity, a survey of the Mohawk–Hudson River junction area in New York, co-sponsored by the Smithsonian Institution and overseen by Robert M. Vogel (1973). Two earlier surveys, in 1967 and 1968, of New England Textile Mills can be interpreted as dry runs for the new agency.

The significance of HAER in the formative years of American IA cannot be overstated. HAER served as a lodestone for practical expertise, setting standards for documentation that remain in effect today and are both the envy and the model for standards in other countries (Fig. 1). HAER, in conjunction with the Smithsonian, was the source of key personnel and support for the growing group of professionals and enthusiasts that make up the IA community. These early activities and players combined in 1971 to create a new organization, the Society for Industrial Archeology (SIA), to promote interdisciplinary exchanges, generate publications and bibliographic resources, to educate the public and the government about the values of preservation, and study of industrial sites (Hyde, 1991).

The genesis of SIA followed fairly closely after the creation of the Society for Historical Archaeology (SHA) in 1967, and there was serious consideration given to being an affiliate of SHA. However, the perceived differences between constituencies resulted in a separate society being formed. Even though there is and always has been considerable overlap in membership and goals, the two groups have significant differences as well, superficially symbolized in the divergent spelling of archaeology (SIA eschews the second "a"). A flurry of published discussion between Robert Vogel and Vincent Foley also marked the beginnings of IA and characterized some of the differences (Foley, 1968, 1969; Vogel, 1969). Foley argued that IA was not archaeology because it focused on preservation, many practitioners were not professionals, and most of all, they did not dig for their data, the "proper" form of archaeology. Vogel's rejoinder was incredulity that a preservation ethic could be construed as bad, that amateur archaeologists may be professionals in their own right and are capable of making excellent contributions to research, and finally that the limitation of physical data sources to buried artifacts was ludicrous on the face of it. This dialogue probably changed no one's mind, but typified some of the tensions between historical archaeology and IA in those days.

Some notable examples of American archaeologists tackling industrial sites in a disciplined way appeared in the 1980s and 1990s. George Teague's (1987) work with the NPS treated a number of industrial sites in the western United States and argued for an anthropological perspective on workers and the workplace. He faced the tensions referred to above very directly in his Ph.D. dissertation, saying "Whether an integrated archeology of industry comes to pass, it is well to remember that there are only two kinds of archeology: not industrial and historical, but good and bad" (Teague, 1987:227). Bruce Council, Nicholas Honerkamp, and Elizabeth Will published an excellent archaeological site report on an ironworks in Tennessee, placing the industry within a regional and national context (Council et al., 1992). On a more comprehensive scale, Robert

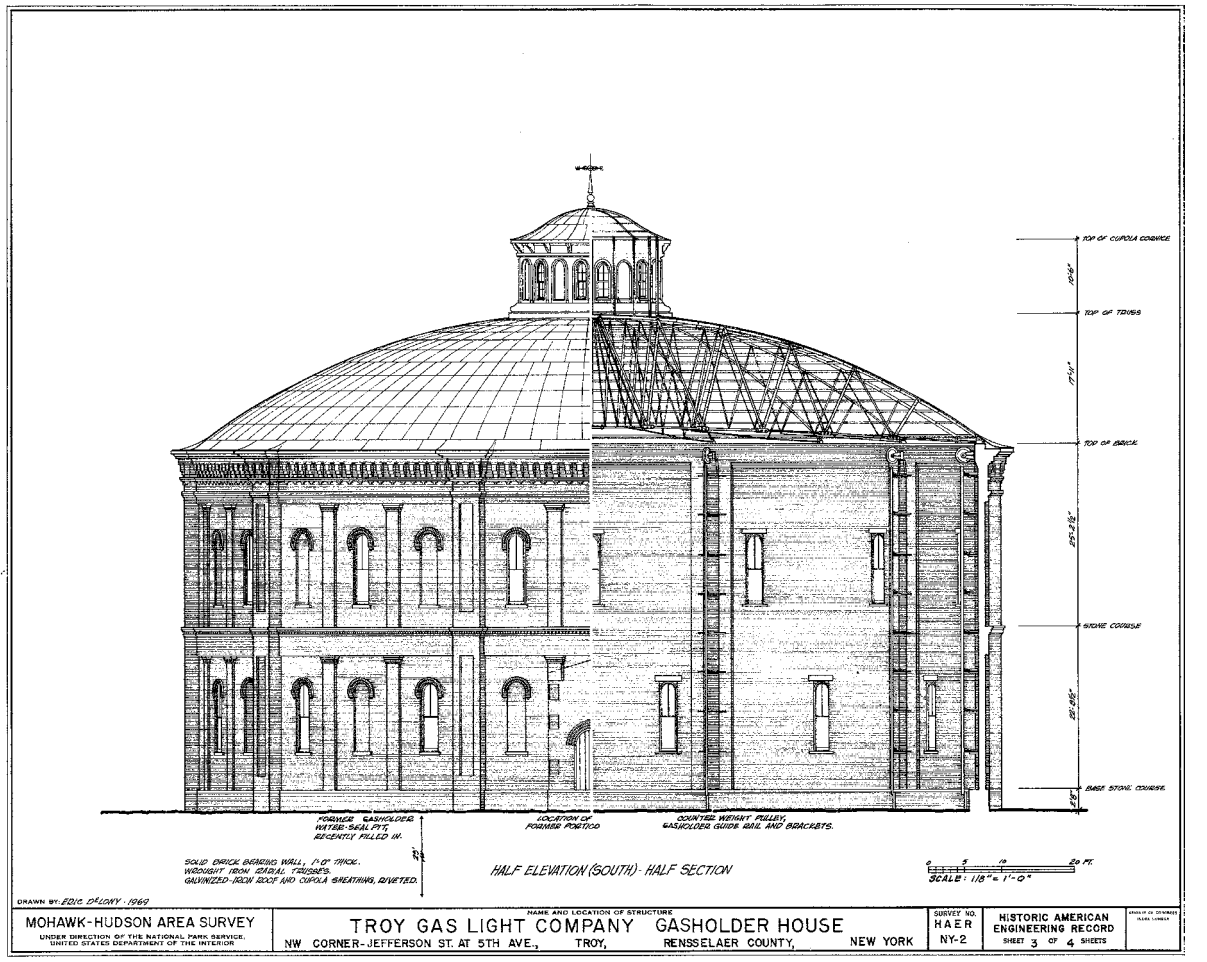
TOP OF CUPOLA COPING
TOP OF TRUSS
TOP OF BRICK
STONE COURSE
BASE STONE COURSE
FORMER GASHOLDER INTAKE SEAL PIT, RECENTLY FILLED IN.
LOCATION OF FORMER PORTICO
COUNTER WEIGHT, PULLEY, GASHOLDER GUIDE RAIL AND BRACKETS.
SOLID BRICK BEARING WALL, 1'-0" THICK. WROUGHT IRON RADIAL TRUSSES. GALVANIZED IRON ROOF AND CUPOLA SHEATHING, RIVETED.
HALF ELEVATION (SOUTH) - HALF SECTION
SCALE: 1/8" = 1'-0"
DRAWN BY: EDIC DELONY - 1969
MOHAWK-HUDSON AREA SURVEY
UNDER DIRECTION OF THE NATIONAL PARK SERVICE, UNITED STATES DEPARTMENT OF THE INTERIOR
NAME AND LOCATION OF STRUCTURE
TROY GAS LIGHT COMPANY GASHOLDER HOUSE
NW CORNER-JEFFERSON ST. AT 5TH AVE., TROY, RENSSELAER COUNTY, NEW YORK
SURVEY NO. HAER NY-2
HISTORIC AMERICAN ENGINEERING RECORD
SHEET 3 OF 4 SHEETS

Fig. 1 Gasholder, Troy, New York, documented by HAER in Mohawk–Hudson Area Survey (HAER Collections, Library of Congress). This image serves also as the logo for the Society for Industrial Archeology

Gordon and Patrick Malone (1994) published their *Texture of Industry, An Archaeological View of the Industrialization of North America*. This encyclopedic summary addresses not only hundreds of sites and landscapes, but also investigates major themes of historical and technological change, employing an archaeological perspective informed by scientific and experimental studies, as well as thorough historical research and reasoning.

Neither SIA nor HAER has ever included a dominant constituency of archaeologists. The use of the term "archeology" in the name of the society followed on British precedents and related to the emphasis on physical evidence rather than the documentary sources. While archaeologists have always been present, and often influential, in SIA, archaeology has been very scarce in HAER projects. The NPS has archaeologists in other divisions and there seems to be little interaction with HAER. Architects, historians, and engineers have dominated HAER, which is closely affiliated with the Historic American Buildings Survey (HABS), from the start. The organizers decided from the beginning to pursue a path separate from the social sciences orientation of most mainstream archaeologists, a path that emphasized high-quality documentation and description. Not only have they conducted detailed documentation projects on hundreds of sites over the years, but they have also overseen a number of statewide surveys of industrial

sites, surveys that serve as baseline assessments for managers and scholars alike (DeLony, 1999).

SIA has grown slowly but surely, with an eclectic mix of professional and avocational members numbering nearly 2,000. Regular publications include a quarterly newsletter and biannual journal (*IA, Journal of the Society for Industrial Archeology*). SIA holds annual conferences, a separate set of fall tours, and occasional study tours, in addition to its publication activities. In recent years, several small grants have been awarded to preservation groups taking an activist role in the support of industrial heritage preservation. A significant proportion of the SIA membership (like that of the AIA) is drawn from avocational industrial enthusiasts, people who make their livings in other ways, but are fascinated and passionate about some aspect(s) of industrialization for their own sake.

IA on the International Scene

It was no coincidence that the Bath Conferences in the United Kingdom helped to spawn the primary international IA group, The International Committee for the Conservation of the Industrial Heritage (TICCIH), after a series of meetings beginning in 1973. TICCIH has grown in influence and impact over the succeeding decades, serving as a venue for scholarship and political action. With over 40 nations represented, TICCIH holds regular congresses every 3 years and occasional intermediate meetings, most with published proceedings (Nisser, 1978; Palmer and Neaverson, 2000; Trottier, 1998; Wright and Vogel, 1984). It publishes a newsletter (TICCIH Bulletin) and sponsors a journal (*Patrimoine de l'industrie: Industrial patrimony, resources, practices, cultures*). Since sealing an agreement in 2000, TICCIH has also served as a Scientific Committee for the International Council on Monuments and Sites (ICOMOS), providing expert advice on World Heritage nominations of industrial sites.

There are several other serial publications in Europe that treat industrial heritage concerns. It is interesting to note that while the scholarship is sound, most of these publications are more like magazines than like journals. For example, *Industriearchäologie* is published quarterly in Switzerland, in the German language, and offers a slick and colorful look at a global array of industrial heritage topics. Another example in German, *industrie-kultur*, is published quarterly by the Rheinland Industrial Museum in Essen. It is also slick and colorful, generally taking a thematic or topical approach, with recent issues on gold, Russia, and paper, for example. It includes book reviews, news from other countries, and a calendar of events and exhibitions. Published by the Comité d'information et de liaison pour l'archéologie, l'étude et la mise en valeur du patrimoine industriel (CILAC) under the auspices of the French Ministry for Culture, *L'archéologie industrielle en France* is another glossy and attractive volume with conference reports, reviews, a calendar, and scholarly articles on a range of international industrial heritage topics. An Italian magazine celebrating industrial heritage, *Scuola Officina*, has been published for several years by the Museum of Industrial Patrimony in Bologna.

Industrial heritage conservation has been a serious undertaking in Europe for some years, with a number of successful examples. Here, I will only consider three. The Ecomuseum approach, combining cultural and natural resources in context, has been very popular in Sweden, and has articulated with industrial heritage preservation efforts to excellent effect. In particular, in the Norberg area of central Sweden, where metal mining and processing has been practiced for centuries, serious attention has been paid to integrating environmental conservation efforts with preservation and interpretation of industrial sites and landscapes. This region is particularly rich in industrial heritage of both tangible and intangible sorts. There are extensive archaeological remains of preindustrial iron production, including the excavated site of Lapphyttan, the earliest securely dated blast furnace in the world, dating from the thirteenth century (Nisser, 1983), and its nearby-reconstructed twin, New Lapphyttan. The Norberg area also boasts a great number of well-preserved iron- and steel-producing sites and landscapes dating from the seventeenth to the twentieth century, including Englesbergs Bruk, a World Heritage Site (Fig. 2).

In Germany, a number of premiere examples of industrial heritage preservation exist, including several museums devoted to industry. A recent initiative with great promise and impact lies outside the museum and the academy—the Route of Industrial Heritage of the Ruhr. Over the past few years, an ambitious initiative for cultural and economic regeneration in this depressed iron and steel region has linked dozens of

Fig. 2 The eighteenth-century Englesbergs Bruk blast furnace iron-making complex, Norberg, Sweden, which is listed as a World Heritage Site (photograph by the author)

sites and organizations in southwestern Germany as part of an innovative effort to promote and preserve the physical landscape of industrial society through heritage tourism. The success of this effort has led to the development of a European Route of Industrial Heritage, a European Union initiative that will link hundreds of sites and landscapes across the continent for heritage tourism. A critical element for consideration here is that the sites included must meet strict criteria for quality of interpretation and background research, an approach that intimately combines elements of scholarship and conservation (see http://www.route-industriekultur.de and http://en.erih.net/).

In Spain's autonomous province of Catalonia, the National Museum of Science and Technology coordinates a network of more than 20 sites and museums that reflect the rich industrial heritage of the province. Museums dedicated to cement, paper, leather, textiles, mining, railroads, and other industrial pursuits preserve sites where these activities were undertaken and interpret industrial heritage for the public in high-quality presentations (see http://www.mnactec.cat/).

An Academic Base for IA

In recent years, in the United Kingdom, the United States, and beyond, there has been increasing interest in broadening the reach of IA and developing an academic home for training future generations of practitioners. Academic degree programs have been developed in conjunction with the Ironbridge Gorge program, at Leicester University, at Michigan Technological University (MTU) (Seely and Martin, 2006), and recently at the University of Padua, among others. A new degree program in Industrial Archaeology has been developed under the direction of Dr. Helmuth Albrecht at Technische Universität Bergakademie Freiberg, within the Department of the History of Science and Technology. The Royal Institute of Technology in Stockholm has an innovative Ph.D. program in Industrial Heritage Studies within the Department of the History of Science and Technology (Nisser, 1983). The Department of Archaeology at Boston University has long offered IA courses and supported extensive fieldwork at the nineteenth-century Boott Cotton Mill in Lowell, Massachusetts (Beaudry and Mrozowski, 1987). The slightly uneasy interdisciplinary position of IA in the interstices between history, anthropology, and engineering has made the discovery of a happy academic home somewhat difficult, because it does not easily fit in anywhere, and because novel enterprises in the academy are most welcome when they involve a practical combination of money and job prospects.

The Heritage/Archaeology Divide: A Crisis of Identity?

It is fair to say that early IA efforts in both the United Kingdom and the United States were aimed primarily at heritage preservation and documentation. While there were always elements of broader scholarship at work, the dominant focus was on recognition of the physical remnants of industrial heritage and on high-quality documentation and preservation. This heritage orientation is laudable, and has had an important impact on cultural values. At the local, national, and international levels, attention is being paid to industrial sites in ways never before imagined, largely due to the influence of IA scholarship. For instance, every county in England has a museum dedicated to industrial history, generally based on an important site and actively engaged in interpretation for the public. Many key industrial sites and landscapes are the focus of significant preservation and interpretation efforts. The Ironbridge Gorge comes immediately to mind as the premier example. Home of the first iron bridge, and touted by some as the home of the Industrial Revolution because of its central role in the shift to coke as fuel in iron making, this site exemplifies much of the British pride in industrial heritage (Alfrey and Clark, 1993; Alfrey and Putnam, 1992).

A number of sites within industrial contexts have been studied archaeologically without explicit reference to or identification as IA. Much of the recent work of archaeologists including Paul Shackel, Robert Paynter, and Stephen Mrozowski falls into this category. Shackel's extensive work at Harper's Ferry, for instance, deals with the social consequences of industrialization, but would not likely be identified as IA (Shackel, 1996, 2004; Palus and Shackel, 2006). Paynter's (1989) excellent work on inequality and Mrozowski's extensive material on class (for example, Mrozowski, 2006) also deal with matters of central importance to understanding industrialization from an archaeological perspective, but would not be identified as IA by most readers. None of these authors generally publishes in the primary IA journals, nor present their work at the IA conferences. Their archaeological practice is focused elsewhere. Yet the work that they do has considerable interest and import to any examination of industrialization as a social process.

The U.S. National Park system has incorporated a number of fascinating industrial sites in its heritage preservation role: Hopewell, Saugus, Lowell, Tredegar, Kennecott (Fig. 3), Springfield Armory, Harper's Ferry, and Keweenaw among them. The HAER program continues to generate high-quality documentation of sites and structures, which is available in a highly accessible online collection maintained by the Library of Congress (see http://memory.loc.gov/ammem/collections/habs_haer/hhmap.html).

Fig. 3 Kennecott Copper Mill, Wrangells St. Elias National Park, Alaska (photograph by the author)

The World Heritage List, maintained by ICOMOS (with advice from TICCIH on industrial sites), includes 830 properties, 644 cultural, 162 natural, and 24 a mix of cultural and natural. Twenty-two of those sites can be characterized as representing Industrial Heritage, most of them inscribed in the past few years. The United Kingdom has distinguished itself recently by seeing six IA sites through to inclusion: Cornwall and West Devon Mining Landscape, Saltaire, New Lanark, and Dewent Mills (the last three are all textile-production sites), Blaenavon (an iron-producing region in Wales), and Ironbridge Gorge. There is a Cuban coffee plantation; a high-mountain copper-mining community in Chile; coal, iron, and steel sites in Germany; mines and iron plantations in Sweden; and salt works, canals, bridges, mills, and associated landscapes from Belgium to Poland. This kind of recognition is a direct result of high-quality scholarship and educational efforts to bring awareness of industrial heritage to the public eye.

On the "IA as archaeology" side of the ledger, more emphasis has been placed on generating scholarship that helps to illuminate the process of industrialization and its impact on society. Research has often concentrated more on workers' housing, communities, and landscapes, rather than on technology or the workplace. A debate within the United Kingdom centered on whether IA was a period or a thematic study—defined by the period of industrialization or by the process of industrialization (Clark, 1987; Palmer; 1990). The consensus among British academics was that it was a period study, consistent with the subdivisions within academic archaeological study, such as Classical, Medieval, etc. This is consistent with developments at Palmer's home institution, Leicester University, where IA ultimately found a solid home within the School of Archaeological Studies, later headed by Palmer. Palmer and her long-time writing partner, Peter Neaverson, also contributed an influential textbook called *Industrial Archaeology, Principles and Practice* (Palmer and Neaverson, 1998).

Sessions and papers focused on IA have become commonplace at the meetings of the SHA (Quebec City in 2000 [Cassell, 2000] and Providence in 2003, for example) and the SPMA. Special symposia exploring the reach and future of IA have been held by SIA ("Whither IA?") in Lowell in 1998, a joint conference by AIA and SPMA ("The Archaeology of Industrialization") in Bristol in 1999, an AIA conference ("Understanding the Workplace") in Nottingham in 2004, and even the Theoretical Archaeology Group (TAG) held an IA-themed conference ("An Industrial Revolution? Future Directions for Industrial Archaeology") in Manchester in 2002. "Whither IA?" was meant to assess both the origins and future of the field, in North America and abroad, and while the conference did not result in a unified publication of proceedings, a number of the papers have appeared on their own and gave a good flavor of the topics under consideration (Cleere, 2000; Gordon, 2000; Gross, 2001; Hardesty, 2000; Hyde, 2001; Leary and Scholes, 2000; Malone, 2000; Palmer, 2000; Quivik, 2000; Roth, 2000; Trinder, 2000). Topics such as industry in the twentieth-century city, industrial landscapes, archaeometric analysis of artifacts, World Heritage designations, heritage management, and experimental archaeology covered a broad range, well beyond traditional concerns with descriptive documentation. See Hyde's (2001) summary statement for his assessment of the symposium.

The AIA/SPMA conference resulted in a published book of proceedings (Barker and Cranstone, 2004). A wide-ranging set of papers sought to clarify the core values and approaches of the two somewhat divergent archaeological subdisciplines and worked to breakdown the relatively artificial barriers that had separated practitioners. David Cranstone's (2004) thoughtful concluding essay sets this divergence in an intellectual and historical context, including the notion that the historical/post-medieval approach tends to emphasize consumption, while the industrial approach focuses on production.

The AIA conference "Understanding the Workplace" was published as a volume of the AIA Review, bringing together 20 papers on a variety of topics and co-edited by David Gwyn and Marilyn Palmer (Gwyn and Palmer, 2005). A decidedly unsystematic and uncritical selection of the papers provides a sense of the volume (Alderton, 2005; Bayley and Williams, 2005; Falconer, 2005; Hughes, 2005; Mellor, 2005; Nevell, 2005; Oglethorpe, 2005; Palmer, 2005; Symonds, 2005). From discussions of transportation, textiles, and housing, to archaeological science applications, heritage agendas, and urban space as

social construct, these papers also reflect a broad range of considerations under the rubric of IA.

The TAG conference also resulted in a book of proceedings (Casella and Symonds, 2005). Most of the papers touch on "weighty issues" such as globalization, post/modernity, class, gender, and power. The heritage orientation of earlier IA conferences in the United Kingdom is largely absent, save for the paper by Clark (2005). Interestingly, the concluding essay by Beaudry (2005) finds the obsession with definition of the appropriate field of study somewhat meaningless, arguing instead for a more holistic approach that minimizes the pigeonholing instinct that accompanies specialization. She maintains that there are multiple worthwhile paths to understanding the effects of industrialization and the rise of consumer culture, rejecting the notion that historical or IA should be a "unitary field, or the notion that all of us should subscribe to an overarching program of research and cleave to a single paradigm or theoretical perspective" (Beaudry, 2005:301–314). Her discussion of various approaches employed by the authors in this and other volumes provides a stimulating set of alternatives. Finally, Beaudry (2005) offers her reflections on the business of heritage, the realm of preservation, and avenues that might help us to engage and support broader audiences, making greater impacts on the societies we live in.

A Case Study of IA in the Twenty-First Century: The West Point Foundry

The West Point Foundry was established in the Hudson River Valley, about 50 miles north of Manhattan, in 1817 by a consortium of prominent businessmen and military figures. Located across from the new U.S. Military Academy, the foundry specialized in ordnance production, building cannon and shot for the U.S. Army and the U.S. Navy for almost 100 years. They also produced an array of iron products ranging from stoves and agricultural implements to the first locomotives in America, steam engines for industrial and maritime applications, massive pumps for installations, such as the Brooklyn Navy Yard's dry dock, pipes and valves for the Croton Aqueduct to provide water for New York City, and heavy equipment for the global sugar industry. This business has an illustrious history, serving as an early example of "vertically integrated" production, where all aspects of complex manufacturing, from raw materials to distribution, were controlled by a single enterprise. They might also be characterized as an example of the "military–industrial complex," where industrialists were allied closely with decision-makers in the government and military. In this case, the connections were through both business and family ties. At any rate, the West Point Foundry was a significant producer and innovator, its long-time Superintendent Robert Parrott having developed and produced the Parrott-rifled cannon there.

The 100-acre site of the West Point Foundry, largely abandoned over much of the last century, was acquired by an environmental organization, The Scenic Hudson Land Trust, Inc., in 1996 as part of their mission to improve river access and green space preservation in the Hudson Valley. After becoming aware of the historical character of the property, Scenic Hudson engaged MTU's IA Program in a partnership to take advantage of and develop the historical dimensions of the site. MTU operates its Field School in Industrial Archaeology on-site each summer, providing expert advice about its physical and historical resources to Scenic Hudson, providing outreach opportunities for schools and the local community, and using the site as a world-class training ground for educating archaeologists. Scenic Hudson supports the research, outreach, and educational enterprise with generous funding. Graduate students help design research agendas, direct fieldwork, analyze results, and write up technical reports as part of their master's and doctoral degrees. In this way, both the general public and the academic community benefits, since the research results help to guide interpretation and management of the site in the public interest. Public open house weekends, volunteer opportunities, and integration into school curricula also serve to broaden the impact of the research work (see http://www.westpointfoundry.org/).

While the industrial nature of the site was and is the central element that drives the research, this project explores more than the just the technical side of the enterprise. Initial attention was focused

on research design, the development of a database of historical resources (Norris, 2002), and the characterization of the site's physical development overtime via historical and modern map resources (Valentino, 2003). Remote sensing, excavation, and historical research have been used to investigate the waterpower system (Finch, 2004), the boring mill (Herzberg, 2005), the blowing engine for the blast furnace (Timms, 2005), the blast furnace itself (Kottlensky, 2007), and the casting house (Fig. 4). The previous projects were written-up as Masters' theses, while several other productive components of the site have been addressed in technical reports (on file with MTU). Beyond these technical dimensions of the site, the general development of the community and the relationship of the workers to the managers at the site are also under investigation. The latter has been pursued by way of excavations in the Vinegar Hill workers' neighborhood and two seasons of excavation at the so-called East Bank House (Fig. 5) (home of the first engineer, later converted to a boarding house [Deegan, 2006]). Elizabeth Norris of the University of Massachusetts is currently working on a Ph.D. dissertation that will address the former by focusing on an archaeological analysis of the larger community. Both the technical and the social dimensions of the site and community are under study in Norris's project, demonstrating the potential for integrating the seemingly disparate elements of historical and IA under one umbrella.

Conclusion

The oft-perceived conflict between the emphasis on documentation and preservation supported by governments, museums, and nonprofessional enthusiasts on the one hand, and social science driven by academic archaeologists on the other hand, has driven a wedge into the practice of IA, a wedge that is unfortunate and unnecessary. There is enough room for both lines of emphasis and great opportunities for mutual benefit. The documentation and preservation advocates have had great success in saving sites, educating the public, and raising awareness of the value of industrial heritage sites on both the national and the global scenes. The academics have made great strides in explaining the dynamics of industrialization as a process, and have striven to raise up a generation of scholars to carry on the work of research and interpretation. Any rational student of the recent past recognizes that there is a need to understand both the technical aspects of industry, from the molecular level of detail seen in archaeometry to the industrial networks of production and distribution, and the

Fig. 4 Excavated ironworking cupola base, West Point Foundry, Cold Spring, New York (photograph by Michigan Technological University staff)

Fig. 5 East Bank House, West Point Foundry, Cold Spring, New York (photograph by Michigan Technological University staff)

larger scope of social dynamics within communities, political and economic actions, and even globalization. Some researchers must focus on the technical aspects of iron making, while others study resistance to industrial discipline; some must concern themselves with the minutiae of waterpower, while others deal with the power of capital. All may fruitfully work within the scope of archaeology, whether styled as historical, post-medieval, or industrial.

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Studying the Archaeology of War: A Model Based on the Investigation of Frontier Military Sites in the American Trans-Mississippi West

Douglas D. Scott

> The history of technology is part and parcel of social history in general. The same is equally true of military history, far too long regarded as a simple matter of tactics and technical differentials. Military history too can only be understood against the wider social background. For soon as one begins to discuss war and military organization without due regard to the whole social process one is in danger of coming to regard it as a constant, an inevitable feature of international behavior. In other words, if one is unable to regard war as a function of particular forms of social and political organization and particular stages of historical development, one will not be able to conceive of even the possibility of a world without war (Ellis, 1986:1).

Introduction

Military sites, particularly forts, have long been of interest to archaeologists. There are a plethora of site reports in the literature detailing the results of investigations at American military forts, camps, prisons, and battlefields. These investigations have often been conducted as ancillary studies to the preservation, restoration, reconstruction, or interpretation of military-related sites. Many of the investigations have had little or no theoretical orientation or explanatory goal above that set by an architect or interpreter. This statement is not made as a negative criticism of the many fine reports that have resulted; rather, it is a statement of fact made with the knowledge that, until recently, the archaeological study of military sites in general, and westward expansion American sites in particular, has had a limited research orientation. Here I intend to present some theoretical perspectives and models for the anthropological and archaeological investigations of military sites. While I do not ignore work on military sites east of the Mississippi River or in other parts of North America (or the world), my own research focus is on the Trans-Mississippi West and U.S. westward expansion, so the majority of the examples are drawn from that body of research.

Military sites are usually one of the best-documented site types available for study for the historian or historical archaeologist. Military sites are easily defined archaeologically and are relatively compact social, cultural, and physical units, which make them ideal for historical and anthropological studies. Military sites also have unique aspects that are related to their function, in that they are related to the prevention or making of war. In that area, military sites offer a unique perspective on the behavioral aspects of a culture, or cultures, in conflict. The intent of this contribution is to define an archaeological or artifact pattern by which military sites can be studied with an anthropological perspective. This perspective holds that military sites and their occupants exhibit a cultural behavior that is highly structured and stratified. The military is described as an element of society, a subcultural unit that mirrors the greater society's cultural ideals, constraints, and orientation. Military sites, because of their structured and ranked nature, provide information on a well-defined segment of the broader society in which to study behavioral patterns and cultural expressions of economic and social status. While the focus here is on U.S. Army frontier military sites west of the Mississippi River,

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it is a corollary that any era's military sites will exhibit unique patterns. Those patterns can be identified and interpreted as they relate to the broader cultural entity of which they were a part. Technological changes through time will be evident, and those technologies related to the making of war will be horizon markers for the adaptive responses seen in the archaeological record of military site construction and battlefield patterns.

Military Sites as an Expression of the Parent Culture

In the last 30 years, the theoretical perspective for studying the military has been defined and been given an impetus in several seminal works (Carman, 2005; Geier and Winter, 1994; Geier et al., 2006; Lewis, 1984; South, 1977; Steffen 1980). Authors, in their own manner, argue that the study of military history and archaeology must be accomplished by seeing the military as a subset of broader cultural patterns. As the prominent British military historian John Keegan (1993:223) has so concisely stated, "Military sociologists take as their premise the proposition that any system of military organization expresses the social order from which it springs."

One element often discounted in the literature of war, because there is no ready means to study it, is the allure of the warrior life. The culture of the military is suited to some more than others. Those that best adapt to the structure and discipline of the military are often those that require order in their lives. They define the military culture, and they refine it for themselves. Often they take risks and do their job of war whether they are touted by society as a whole or not. They do it because it is their job, and the awards and rewards are not important; intrinsic reward is of only minor interest. There is fulfillment of a personal nature in the sharing of risk and hardship that is purely symbolic and personal, but is satisfying to the group members.

Obviously, booty, control, power, new lands, structure, and order are also goals that are implicit in war making, but they are narrow and limited explanations to the allure of the warrior. These are often national or societal goals established and pushed by the power elite, either implicitly or explicitly. These goals are often reflected in the warrior class, but do not explain the willingness to continue taking risks and enduring hardship (Keegan, 1993:226).

Anthropologists and sociologists use the tenet that human behavior is patterned as their basic premise in studying people. The basic concept is that human behavior is constrained by the norms, values, morals, and sanctions of society, all of which combine to govern a group. Individual behavior may deviate from the expected norms to a certain degree, but in order to maintain membership in a group, society, or culture, an individual must generally conform to the group standards.

Archaeologists extend this premise to the physical remains of a society. Group and individual beliefs and behaviors are reflected in the material culture of that society, and thus can be studied by archaeological means. Among those advocating a processualist approach to the study of military sites is Lewis (1984), who identified a military settlement pattern within the American frontier. Lewis was influenced by historian Jerome Steffen's (1980) cosmopolitan frontier theory, which espouses the concept that cosmopolitan frontiers are regions of specialized economic activity that exhibit minimal cultural diversity during colonization. Hardesty (1982) and Steffen (1980) have stressed the structural similarity and cultural continuity of these frontiers within the colonization process.

Within this economic model, military sites are seen as a slight deviation from the norm, in that they were not developed for direct economic exploitation (Lewis, 1980:247–248). Instead, they stand as bastions of protection and symbols of power that are meant to ensure that the parent culture can exploit those resources without undue interference from Native cultures or other competing cultural groups. Lewis (1980:248) stresses that military frontiers are not found in all regions of colonization, but only where threats to the peaceful extraction of resources are seen, and a structured pacifying force is required. The cosmopolitan frontier concept is an excellent umbrella theory in which to view the American frontier military establishment. The economic thrust of the concept appears to be valid, and

it is one that can be subject to archaeological and historical investigation particularly in light of today's Marxist and postprocessual theoretical positions.

Fraser's (1983) historical study of the military in the Southwest is an excellent example of the use of an economic approach to explain the influence of the U.S. military in regional development. On the frontier, the military required a variety of support services to accomplish its missions. The Army, with its small budgets, limited manpower, and extended supply lines, had to acquire or purchase many services or goods from local inhabitants. The strict, and often severe, Army budgets of the nineteenth century required the field commanders to take the most economical measures possible in the acquisition of goods and services.

Fraser (1983) presents an argument that the Army's presence in the West, specifically the Greater Southwest, stimulated the development of local economies. He argues that the presence of the Army in New Mexico and Arizona, and to some extent in California, during and after the Mexican–American War, stimulated the development of a variety of support services. The places that provided these services, including hotels, flour mills, logging camps, farms, ranches, breweries, and saw mills, would not have developed as rapidly, if at all, without the pacifying effect of the Army's presence. Fraser's (1983), as well as Staski and Reiter's (1996), theses are economically based and emphasize market stimulation of an area by a new arrival with specific support requirements. Both arguments presuppose that such support services will be developed by local inhabitants. Furthermore, both contend (Fraser, 1983:180–190; Staski and Reiter, 1996) that the presence of the Army, from 1846 to the beginning of the American Civil War, stimulated new economic endeavors, created new jobs, and realized a large profit for the entrepreneurs who chose to actively participate in the marketplace.

Undoubtedly an economic perspective is valid; however, it does not take into account many cultural factors. The presence of the Army in the Southwest was a direct result of the Federal government's policy of manifest destiny, which was a culmination of the basic American and general Victorian philosophy of cultural superiority and the need for territorial expansion. Fraser's view of a symbiotic economic relationship between the military and the civilian economy is good, but its cause must be viewed from a cultural perspective. First, the Army's presence in the Southwest, and in most other places in North America, must be seen as an imposition of an alien (Anglo-American) culture on "in situ" groups (i.e., Hispanic or Native American). The in situ cultures did not have the services in place to support the U.S. Army's occupation of the region and, of course, were, in some cases, actively resisting American expansion. The important point is that the support-service requirements were those of the mainstream of Victorian America. The Army was not trying to acculturate to the area; instead, it was imposing a previously defined culture on the existing societies. In order to maintain its own cultural identity and distinctiveness, the Army required goods and support services similar to those found in its core area. In New Mexico during 1846–1851, soldiers leaving the service, old Santa Fe Trail merchants, and entrepreneurs from the East, recognized this need and within their own cultural venue proceeded to import tangible and nontangible elements of Victorian-American culture to the Southwest. The imposition of American cultural ideals over the Native cultural expressions is generally termed the Territorial period. The archaeological implications of this period of transition are obvious.

The Mexican–American War should be a horizon marker in the Southwest, reflecting the transition from a Mexican- or Spanish-dominated economy to one dominated by Anglo-American industries and goods. Initially the industries and goods should be associated with the maintenance of the Army in the area and then gradually spread to a wider stream of society as the materialism of Victorian philosophy becomes more infused in the society.

While the economic approaches of Fraser (1983) and Steffen (1980) to the study of frontiers, specifically military frontiers, yield useful and valid hypotheses, they should not be the only approaches. The pattern of military sites is best viewed in the context of the culture that produced it and fostered the economic system that placed it on the frontier. Studies of military sites need to be understood within the perspective of the American-Victorian culture. The anthropological concept of the American-Victorian

culture and its attendant archaeological model was developed by Baker (1978). By placing the military within this construct, as a part of the larger cultural scene, archaeological patterns of military sites are more easily investigated and understood (Staski, 1989, 1992; Staski and Johnston, 1992).

The American frontier Army of the American-Victorian era must, a priori, be viewed as a mirror of the rest of the society that it represented (Greene, 1880; Knight, 1978). The material culture of the Army is that of the mainstream society with a few specialized tools to demarcate it from the rest of society. The Army, in effect, becomes a subcultural unit, even more archaeologically recognizable than most ethnic groups because of its material culture. The military is a rigidly structured and stratified subcultural unit by its very nature. Its job is war—the prevention of or making of it—and this job requires a rigidly stratified structure to carry out its goals (Dyer, 1985). The officers assume the higher authority and status, in effect becoming the various levels of staff and line managers. The enlisted personnel are lower on the class scale because they bear the brunt of waiting for or being committed to combat. They are easily equated to the working class in the larger society. This very real and necessary dichotomy provides an excellent point for study. The trappings of the military uniform, from buttons to rank insignia, are indicative of class stratification in all levels of the military. This status differentiation essentially mirrors the whole of Victorian society in a slightly exaggerated form.

Quartered Safe Out Here

The archaeological study of military patterns has tended to focus on the excavation of forts for many years (Carlson, 1979; Hanson and Hsu, 1975; Harrington, 1957; Scott, 1975; Smith, 1972; South, 1974). Some investigators have dealt with artifact patterns and their relationship to site function and past lifeways (Adams, 1991; Bowyer, 1992; Coe, 2006; Lewis, 1980; Wilson, 1965, 1971). Other investigations have focused attention on the definition of patterns. Lees et al. (1983) and Lewis (1984), using South's (1977) frontier pattern, have identified a military site pattern that exhibits a regimented and uniform construction layout, with architectural artifacts dominating the assemblage and personal artifacts being predominantly male and military oriented.

The class and socioeconomic stratification of the military is a well-known phenomenon. Officers were generally better educated and from higher socioeconomic classes than the enlisted men (Greene, 1880; Rickey, 1963). While the officers were better educated and better paid than the enlisted personnel, they were required to provide most of their own kit, with the exception of housing. While in the garrison, officers were required to purchase or provide their own uniforms to meet the current regulations, home furnishings, mess gear, horses, tack, and other equipment, as well as their own food. Firearms and ammunition were purchased privately, although, for field use, an officer could requisition the use of government-issue weapons from the Quartermaster Department, or he could purchase those weapons as well.

Enlisted personnel were fed, clothed, and housed by the Army. Daily rations were provided to all enlisted personnel and, even in some cases, to their dependents as well. The soldiers were issued clothing and all other equipment according to regulations. Married enlisted men deviated from the norm by providing their own household furnishings. The degree of uniformity among enlisted men's living conditions on the frontier is readily illustrated by perusing photographs of nineteenth-century barracks (Brown, 1984). The degree of diversity or reflection of personal preference among the officers is also seen in photographs from this period (Frost, 1964). The dichotomy between the lifestyle of the two classes, officers and enlisted men, is not only apparent in the visual record, but in contemporary literature (Roe, 1981).

Charles King's (1890, 1891) fictionalized accounts of his service as an officer in the frontier Army are excellent examples of class distinctions between the officer and enlisted groups. The accounts, which have been analyzed for their authenticity by Knight (1978), emphasized the self-perceived tribulations of frontier life, while making note of the material culture available to the officer class on the frontier. Obviously contemporary accounts (Boyd, 1982; Roe, 1981; Stallard, 1978)

are better sources for defining the true variety of material culture, but King's work provides an interesting composite literary view of the frontier military.

The archaeological implications of the dichotomy between military classes are obvious. The material culture of the officers should show less uniformity than that of enlisted men. They should be of higher quality to reflect their socioeconomic status. The officers' material culture should also demonstrate greater diversity within classes, which will reflect personal preferences and variations in personal wealth and status within the group, and in the presence of gender-related artifacts. Specifically, officers' military trappings, such as buttons, buckles, and insignia, will be of higher quality than the government-issue trappings for the enlisted men (Adams, 1991; Stachiw, 1978). There should be greater diversity of quality in that material culture class for officers, which will reflect personal taste, personal wealth, and real, or perceived, status. Artifacts associated with daily life, such as tableware, glassware, cutlery, household furnishings, will also be more diverse and of better quality than the enlisted men's materials (Kapler, 1994; Scott, 1989). Again, diversity in those classes between individual owners also should be recognizable.

Artifacts associated with enlisted personnel will be generally uniform in type and distribution. Field equipment, beds, uniforms, rations, and mess gear were all government-issue. With the exception of cooking paraphernalia, table services, and a few personal items, enlisted men's artifacts should show a great deal of uniformity. Company messes were allowed to purchase their own table services and cooking gear with company funds. As a general rule, these were sturdy utilitarian goods. Occasionally a company or regimental device will be found on table services denoting unit esprit d'corps. Additions to the rations, condiments, canned fruits, etc., could also be purchased with company funds to add variety to the ratios issued. Some diversity in the archaeological record might be expected to be reflected in the food-related artifacts. The only area of real diversity that might be expected in artifacts relating to enlisted men's contexts is personal items. These would be private purchase items, such as combs, toothbrushes, smoking pipes, and gaming pieces.

Another area of class stratification that can be studied archaeologically is the housing provided by the government for its personnel (Fig. 1). Quarters for the officers ranged from a room for junior officers, to apartments for the more senior officers, and to an entire house for a post commander. Officers gained no additional space by being married or having children; instead, quarters were allocated by rank. Enlisted personnel usually were housed in company-sized communal barracks. Some noncommissioned officers were allotted a room to themselves, and occasionally a cook or baker might have a room to himself near his kitchen or bakery.

Fig. 1 The officers' quarters at Fort Larned, Kansas, exemplify the higher status that officers of the frontier Army enjoyed (Fort Larned National Historic Site photograph)

Married enlisted men had to fend for themselves until the end of the nineteenth century, when the government began providing some housing for married enlisted personnel.

Officers' quarters tended to be smaller structures divided into quantified space for officers of different rank. The enlisted barracks were generally large communal structures. While the building materials differed from fort to fort, the architectural style of the buildings reflected the current civilian architectural preferences. Officers' quarters tended to be built of better-quality materials and with better workmanship than most nonofficer-related structures. Staski and Reiter (1996) have demonstrated that the adobe used in the construction of the officers' quarters at Fort Fillmore, New Mexico, was of better quality than that used for construction of the enlisted men's barracks.

Generally, a post went through an evolution of building. First was the temporary camp. The camp, often designated officially as a cantonment, consisted of tents. If the camp was intended to be occupied for more than a few months, the soldier-laborers would construct more weather-proof, if not more permanent, structures. Quarters and storehouses would be constructed of available materials, which meant that a fort could be made up of dugouts, adobe, sod, picket buildings, logs, or frame buildings. Often they were laid out on a quadrangle plan. If the post became a permanent station, then the buildings were reconstructed of more durable materials. Stones or bricks were favored, but wooden frame buildings were less expensive, and therefore, predominate. While the architectural style of the temporary camps tended to be vernacular, the permanent stations reflected the prevalent popular architectural styles. The architecture was somewhat institutionalized, and archaeologically this will be seen in the building hardware and the arrangement of architectural features.

Lewis (1984) has noted that frontier military sites are arranged hierarchically around a quadrangle. The pattern is slightly more complex (Hoagland, 2004; Hoagland and O'Dell, 1997), but the quadrangle is the predominate pattern (Robinson, 1977). The primary structures, officers' quarters, enlisted men's barracks, offices, and primary storehouses are usually arranged around the quadrangle; however, ancillary structures, like carpenter shops, blacksmith shops, stables, bakeries, occasionally a hospital, and at pre-1860 forts, pest or death houses, are located outside the ubiquitous quadrangle. Civilian structures, even those authorized by the military (sutlers stores and houses), are often situated away from the quadrangle. A review of 214 nineteenth-century posts located west of the Mississippi River, for which plans are readily available (Hart, 1980), indicated that 90.7 percent ($n = 194$) were arranged around the quadrangle plan. Seven (3.3 percent), which did not fit the plan, were major supply or recruit depots and thus could be considered a central place of supply for the other units. The other 13 forts (6 percent) that did not fit the pattern were, with one exception, fur-trading posts or stage stations pressed into military service. They were existing civilian features used temporarily by the Army. The single exception in this sample is the site of an Army costal defense battery, which is a unique and specialized site.

The orientation of architectural features around a quadrangle should be the archaeological manifestations of a relatively permanent or stationary military site. Ancillary or support buildings or structures should be found outside the quadrangle. The archaeological evidence of architectural features and building hardware should be used a dating guide, as military architecture followed the architectural styles and trends of the civilian world. The majority of hardware, window fenestrations, and construction materials will represent those types readily available to that area, but they will also be found in quantities representing the institutionalized nature of the site. Archaeological sites containing military-related artifacts, but whose arrangement of architectural features does not follow the quadrangle pattern, should not be dismissed as nonmilitary.

If an archaeological site appears to be primarily civilian in nature, yet there are significant percentages of military artifacts, then the site should be considered a temporary military post. Sites without architectural features, but with a predominantly military artifact assemblage, are likely to be temporary camps or battlefields. The temporary camp will yield a diversity of artifacts related to messing and camping. The assemblage might include tin cups, plates, cutlery, bottles, tent pegs, tent pole ferrules, transportation-related items, and miscellaneous military

artifacts (DeRegnaucourt, 1995; Dimmick, 2004; Garrow and Holland, 2005; Geier et al., 2006; Legg and Smith, 1989; McBride and Sharp, 1991; Schack, 1987; Seidel, 1983; Whitehorne, 2006).

Field Fortifications

An all too common perception of the military on the western frontier is the well-mounted cavalry charging the unsuspecting Indian village, or the image of mounted Indians and cavalry chasing each other across the rolling grass-covered plains. Those scenarios did occur, but not often. As Dippe (1980:ix) notes,

> officers and men spent most time in post on routine duty . . . expeditions or patrols into hostile country encountered few Indians and fought fewer. Despite the impression of contact, pounding action, ornate rescues, thrilling bugle calls, and desperate charges, on the whole campaigning was as frustrating as it was tiring, and there was more dust than glory to be had chasing Indians for Uncle Sam.

Combat situations involved infantry as well as cavalry, and sometimes artillery played a significant role. Running skirmishes occurred and usually involved a few men traveling unescorted with attackers taking advantage of their superior numbers or arms. Very few fights occurred on horseback. The clear majority of the 1,000 or so battles, fights, and skirmishes of the "Indian Wars" were fought dismounted, by both sides, using the best available cover to their advantage.

Such combat actions did not always involve the construction of earthworks, but various types of entrenchments were used throughout the "Indian War" period, roughly 1866–1890. When entrenchments are mentioned in the literature, they are often referred to as hastily dug entrenchments with a mound of earth thrown up for protection, or a shallow rifle pit (Fig. 2). Such statements leave the impression of a haphazard construction excavated in order to meet an immediate and life-threatening need. These references also convey a feeling of unpreparedness on the part of those constructing the earthwork, and a lack of familiarity, training, or knowledge of the purpose or use of an earthwork beyond that of turning a few bullets in the immediate engagement. None of this could be further from the truth, as a literature review of the era demonstrates.

Earthworks are seldom mentioned in literature pertaining to the West prior to the Civil War; however, this should not be construed as a lack of knowledge of their use or construction. In general, there does not appear to have been a need for earthworks in the West after the Mexican–American War. They were used in the prehistoric period (Schaepe, 2006), during Roman times (Clunn, 1999; Shulter, 1999), in the Revolutionary War era (Cornelision and Cooper, 2002a), the War of 1812 (Cornelision and Cooper, 2002b), at the Alamo in 1836 (Fox et al., 1976), and during the Mexican–American War (Singletary, 1960) at Fort Brown, where a pentagonal earthwork with bastions was constructed.

By the beginning of the Civil War, most Army officers serving in the West were U.S. Military Academy graduates. By virtue of their academy background, they were well trained as engineers and well versed in the concept of field fortification. They knew the principles and techniques of field fortification construction and were ready to apply them when the need arose.

With the onset of the Civil War, a perceived need arose to construct earthworks to protect towns, harbors, navigable rivers, and other strategically important locations. They were even present in the Trans-Mississippi West. At a number of western forts, notably Forts Sisseton, South Dakota; Kearny, Nebraska; Craig, New Mexico; Camp Nichols, Oklahoma (Ferris, 1971:252); Bent's New Fort, Colorado (Ferris, 1971:102); Fort Hindman or the Post of Arkansas (Walker, 1971); and Union, New Mexico, formal earthworks were constructed and manned in anticipation of attacks by opposing troops or Indians.

The end of the Civil War did not eliminate the need or use of field entrenchments. They were constructed and used throughout the "Indian Wars," including the 1868 Hayfield Fight at Fort C. F. Smith, Montana (Appleman, 1960:138); Beechers Island in 1868 (Forsyth, 1930:43; Hutchins, 1960); the Anadarko Affair of August 22 and 23, 1874 (Nye, 1962:209–210); the Battle of the Little Bighorn in 1876 (Godfrey, 1892; Upton, 1990); Big Hole and Bear Paw Battles of 1877 (Beal, 1971); and the final battle of the "Indian Wars," the

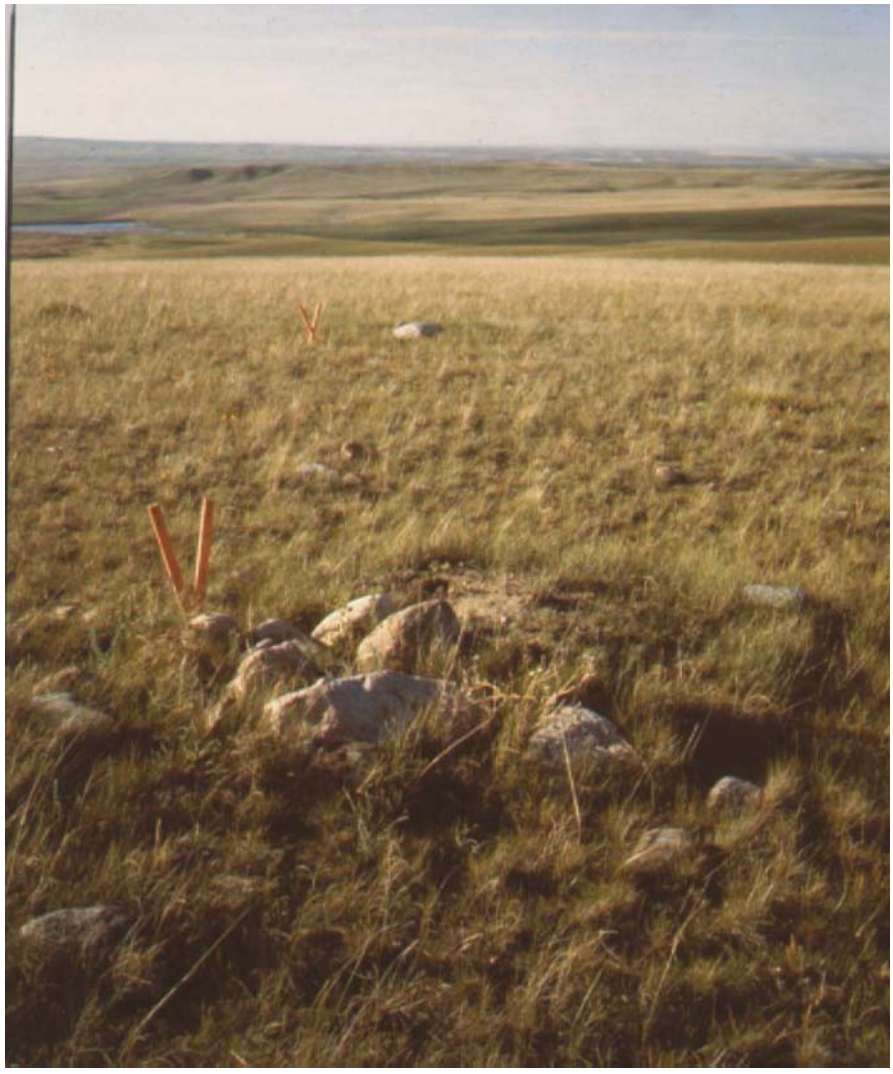

Fig. 2 This subtle depression and rock feature is a rifle pit used by the Army during the 1877 Bear Paw Battle with the Nez Perce (photograph by the author)

Wounded Knee Massacre of December 1890. Earthworks were not just the domain of the U.S. Army. Various Native American groups used rifle pits, trenches, and rock-and-log breastworks (Lockwood, 1987; Nye, 1962; Patterson, 1960; Schaepe, 2006).

The impression left from studying historical documents is that rifle pits and trenches were constructed in the heat of battle and were hasty and expedient affairs. In a sense this is true, as they were temporary and hastily constructed. However, this does not mean they were haphazardly constructed. The Army trained their personnel in the construction of earthworks and rifle pits. Archaeological investigation of earthworks and bomb proofs has focused primarily on Civil War (Babits et al., 1987; Hanson, 1968) and Revolutionary War sites (Hanson and Hsu, 1975), although other sites have been investigated (Cornelision and Cooper, 2002a; Stichelbaut, 2006). These investigations have demonstrated that patterns of construction and occupation are present in the archaeological record and can be interpreted as cultural phenomena.

The late 1870s were a period of experimentation and development for Army equipage, as a result of the extensive Indian fighting in the West. One experiment at Springfield Armory included testing belt knives, a hunting knife (later adopted as the

Model 1881 Hunting Knife), and an entrenching tool, for their reliability in digging hasty entrenchments. The October 15, 1879, test involved four soldiers digging rifle pits with the various tools to test their efficiency (Hardin and Hedden, 1973:4–8). The pits took from 8 to 11 minutes to construct. They were about 4 feet long, 32 inches wide, and 12 inches deep, with the spoil dirt mounded up at one end of the long axis, which was essentially the same as rifle pits employed during the Civil War.

In a guide for officers of the Indian fighting Army, a U.S. Military Academy instructor, Edward Farrow (1881:244–245) describes how to dig a rifle pit, or as he terms it a "shelter-pit":

> All soldiers, and especially recruits, should be frequently exercised in throwing up shelter-pits and shelter-trenches, on grounds of variable contours, and where there is no natural cover.
>
> A very slight parapet of newly excavated earth is sufficient to protect men from the effects of rifle balls. Experiment shows that the penetration of the ball (service rifle) at a range of 10 yards is 20 inches, and only 10 inches at 200 yards.
>
> After a little practice, each soldier will ascertain the form of pit that best suits and protects him. The depth need not be uniform, but should be at least ten inches where the body rests, and six inches elsewhere. With a view to lessening the effect of the enemy's fire, the soldier should lie down well under and behind the cover. . . . Many are the instances recorded where it was impossible to forward the intrenching tools to the front until after the exigency for their use had passed, and the men were compelled to use tin plates, tin cans, fragments of canteens, knives, sticks, etc., in order to get temporary shelter from the enemy's most galling fire. . . . I am an advocate of Colonel Rice's trowel bayonet, after several practical tests of its merit.

A drawing accompanying the discussion illustrates an L-shaped pit with a lunate mound of earth thrown up at its front. The drawing and profile indicate that the pit should be 6 inches deep on the long axis and about 4 feet long. The narrow width should be a foot, and the wider section should be 2 feet 3 inches. The depth of the smaller section should be 5 inches to the front and 10 inches sloping at the rear. The dirt mound should be thrown up toward the enemy, and a space of 6 inches should be left between the pit and the mound. The mound should have a height of 14 inches and a basal width of 18 inches. This description is similar to the rifle pits dug during the 1879 Springfield Armory trials, although there are some differences in dimension. Farrow (1881:244–245) also describes a shelter-trench:

> Having arrived on the line (not necessarily straight, but determined by the features of the ground, so as to secure all natural cover), the men either stack or ground arms, and begin to throw the earth to the front (using both hands if necessary) so as to form a parapet from 16 to 20 inches high. All available turf, logs or rocks should be used as a revetment to the interior slope of the parapet.
>
> The main object of these trenches is to afford cover from the fire of the enemy until the proper moment for advancing against him.
>
> When the trench has been made 2 feet wide and 15 inches deep, it will afford excellent cover for one rand kneeling in it, and file-closers lying down in rear. If the trench be made 4 1/2 feet wide, it will afford cover for two ranks kneeling inside of it; if it be 7 feet wide, it will allow the men to lie down in it.

The Model 1881 hunting knife officially replaced the trowel bayonet in 1890. Major J. P. Sanger developed an entrenching method utilizing the hunting knife as the digging implement (Hardin and Hedden, 1973:71–75). He noted that the individual rifle-pit construction technique was ignored in most texts of the day. He suggested that the method of individual entrenchment be a pit constructed under fire for the protection of the head and trunk of the soldier, thus leaving the legs exposed.

Sanger indicated that the pit should slope upward from front to rear. He believed the upward slope was an important feature, so that if the pit were abandoned it could not easily be used by the enemy without alteration. Sanger indicated that a pit 33 inches long, 18 inches wide, 9 inches deep, with a 9-inch-high mound to the front could be constructed, under fire, in about 3 minutes. A photograph of regulars training in Florida during the 1898 Spanish–American War illustrates the actual practice of the Sanger entrenching technique (Urwin, 1988:138–139).

Few field entrenchments have been investigated archaeologically, although at least three trenches in the Trans-Mississippi West have been excavated or tested. One is at the site of the 1836 Battle of the Alamo (Fox et al., 1976), another at Fort Larned, Kansas (Scott, 1974:303), and the third is at Fort Dilts, North Dakota (Haury, 1989). Rifle pits have also been investigated archaeologically at Big Hole

battlefield (Scott, 1987, 1994), Little Bighorn battlefield (Bray, 1958), and Fort Dilts (Haury, 1989:16–25).

It can be expected that the archaeological remains of rifle pits and other earthworks that were constructed by troops trained in U.S. Army techniques, found in the Trans-Mississippi West, will be similar. They may be difficult to define unless they were dug through two or more soil strata or left artifacts behind in the bottom of the entrenchment. Due to the high probability of a rifle pit's subtle surface manifestation, caused by short-term usage and the lack of depth, it may be very difficult to find during site survey or inventory. Rifle pits and field trenches will not necessarily be found spaced at regular intervals on battlefields. The essence of a hasty entrenchment was that it was meant to take advantage of any cover the terrain might offer.

Indian rifle pits, mentioned so prominently in historical documents, are not well identified. It may be assumed that Native American rifle pits will demonstrate less formality and structure than those constructed by formally trained troops. This assumption is based on the understanding that Native Americans in the Trans-Mississippi West followed less-structured tactics and rules of engagement. This assumption requires formal archaeological testing to confirm or revise its basis.

In summary, entrenchments are not always clearly mentioned in the historical record. Many battle sites may have trenches or rifle pits that are not mentioned in historical documents, or are only referred to in the most casual way. Archaeologists inventorying battle sites should be aware that entrenchments may be present regardless of the statements found in the historical source material. Trenches and rifle pits were ephemeral and hastily constructed, and thus may not be mentioned in historical sources.

Hastily dug trenches and rifle pits are likely to exhibit minimal surface manifestations. Close examination of depressions and surface irregularities is warranted to locate these shallow features. Limited excavation suggests that their shallow nature will make their discovery and documentation difficult, but not impossible.

Historical and archaeological evidence indicates that earthworks constructed by organized military forces will be based on a preconceived pattern, which was ingrained during recruit training. The type and size of a trench, rifle pit, or other hastily dug feature will likely be consistent. The spacing of these entrenchments will take advantage of the protection or cover offered by the site's terrain. Spacing will be irregular, but size and shape will be similar between and among entrenchments.

Hasty entrenchments utilized by irregular forces or other cultures are likely to be less formalized in size and shape. It is expected that spatial distribution is likely to be similar to that of organized forces in that the topography will dictate entrenchment placement in order to maximize the protection of the occupants.

Field entrenchments, specifically hasty entrenchments, are seldom-encountered, or at least seldom-recognized archaeological features on battle sites in the Trans-Mississippi West. They do occur, and from historical sources and archaeological examples there appears to be a pattern to their construction and concomitant use. Archaeologists should make themselves aware of the potential for finding these features at battle sites, and they should be alert to their subtlety of form and depth. Additional investigation of other U.S. Army hasty entrenchments and those of opposing forces will likely change some of the precepts presented here; however, until additional investigations occur, these data can be used as a model for the archaeological study of hasty field entrenchments.

The Battlefield Pattern

Battlefields may seem to be a simple type of archaeological site; however, like any other archaeological endeavor the site is often more complex below the surface. Noël Hume (1968) once considered battlefield sites to be a poor place for archaeological investigations. He considered them to be good places to find cannon positions or war relics for museum displays, but not sites worthy of serious archaeological investigation. Recent battlefield archaeology at the Revolutionary War sites of Saratoga, New York (Snow, 1981), Monmouth, New Jersey (Silivich, 1995), and Cowpens (Cornelision and Cooper, 2002b); the Mexican–American War site of Palo Alto Battlefield, Texas (Haecker 1994;

Haecker and Mauck, 1997); the early "Indian Wars" site of Fallen Timbers, Ohio (Pratt, 1995); the Civil War battlefields of Mine Creek, Kansas (Lees, 1994), and Monroe's Crossroads, North Carolina (Scott and Hunt, 1996); the late "Indian Wars" sites of Little Bighorn battlefield, Montana (Fox, 1993; Scott and Connor, 1986; Scott and Fox, 1987; Scott et al., 1989), Big Hole battlefield, Montana (Scott, 1994); the 1868 Washita battle (Lees et al., 2001); and the Red River campaign of 1874 (Cruse 2008); and Apache campaign sites (Adams et al., 2000; Laumbach, 2001; Ludwig and Stute, 1993) has shed an entirely different light on the viability of battlefield archaeological studies.

A battlefield might be expected to be the last place to find archaeologically definable behavioral patterns, but those who engage in combat fight using the established manners and patterns in which they have been trained (Dyer, 1985; Fox and Scott, 1991; Pollard and Oliver, 2002; Rose, 2005; Smith, 2006; Sutherland, 2005). It is precisely this training in proper battlefield behavior that results in the deposition of artifacts that can be recovered by archaeological means and interpreted using an anthropological perspective (Sutherland, 2005). Gould (1983) has pointed out that shipwreck sites are documents of behavior, and as warfare-related wrecks are documents, land battlefields are also archaeological documents of past behavior. Battlefields are no less an expression of culture, albeit a violent one, than are architectural elements.

Clearly battlefield studies can yield information on combatant positions during the course of the battle. They can also provide details of dress, equipage, and, in some cases, individual movements. Archaeological data can provide information on troop deployment, firing positions, fields of fire, and weapon types. Studies of artifact patterning can also reveal unit or individual movement during the battle, weapon trajectory, and range of firing by determining forces of impact. Battlefields viewed in an anthropological context should be seen as the physical and violent expression of a culture, or cultures, in conflict (Conlin and Russell, 2006; Fox and Scott, 1991; Smith, 2006).

Wars are not fought by any party without some explicit or implicit goal. Different cultures have different goals, although the United States has always had clear military goals. At the simplest level, U.S. military policy is clearly stated in today's field manual FM100-5: Operations. These tenets of operations and tactics provide fertile ground for archaeological inquiry. The basic tenets of modern warfare are simply stated in the operations manual: whenever Army forces are called to fight, they fight to win. Army forces in combat seek to impose their will on the enemy. Victory is the objective, no matter the mission, and nothing short of victory is acceptable. The fundamental tenets of the Army operational doctrine describe the characteristics of successful operations. In and of themselves they do not guarantee victory, but their absence makes it difficult and costly to achieve.

The tenets of modern military operation as set forth in FM 100-5 provide a ready-made set of testable hypotheses for anthropological and archaeological inquiries. FM 100-5 lists the tenets as follows:

1. Initiative: the ability to set or change the terms of battle. In the attack, initiative implies never allowing the enemy to recover from the initial shock of the attack. In the defense, initiative implies quickly turning the tables on the attacker. In battle, initiative requires the decentralization of decision authority to the lowest practical level.
2. Agility: the ability of friendly forces to react faster than the enemy. A mental and physical quality, it is a prerequisite for seizing and holding the initiative. The accumulation of chance errors, unexpected difficulties, and confusion of battle creates friction that impedes both sides.
3. Depth: the extension of operations in time, space, resources, and purpose. Operations are conducted throughout the depth of the battlefield with the aim of defeating the enemy more rapidly by denying freedom of action and disrupting or destroying the coherence and tempo of its operations.
4. Synchronization: the ability to focus resources and activities in time and space to provide maximum relative combat power at the decisive point.
5. Versatility: the ability of units to meet diverse challenges, shift focus, tailor forces, and move from one role or mission to another rapidly and efficiently.

Beyond the tenets of operations, there are four primary elements to successful combat: maneuver,

firepower, protection, and leadership, which combine to create combat power—the ability to fight. Again these have significant potential for developing models for anthropological and archaeological investigation of battlefields and warfare in general.

1. Maneuver: the movement of combat forces to gain positional advantage, usually in order to deliver either direct or indirect fire upon the enemy. Maneuver is the means of positioning forces at decisive points to achieve surprise, psychological shock, physical momentum, massed effects, and moral dominance.
2. Firepower: the destructive force essential to defeating the enemy's ability and will to fight. It is the amount of fire that may be delivered by a position, unit, or weapon system.
3. Protection: conserving the fighting potential of a force so that commanders can apply it at the decisive time and place. Protection has four components: operational security, conservation of soldiers' health, morale, and equipment readiness, safety, and avoidance of fratricide.
4. Leadership: the most essential dynamic of combat power is competent and confident officer and noncommissioned officer leadership.

Finally, within Army operations and tactics, there are the nearly sacred Nine Principles of War, which can be used as addressable questions in looking at archaeological/anthropological conflict situations in the United States:

1. Objective: direct every military operation toward a clearly defined, decisive, and attainable objective. The ultimate military purpose of war is the destruction of the enemies' armed forces and will to fight.
2. Offensive: seize, retain, and exploit the initiative. Offensive action is the most effective and decisive way to attain a clearly defined common objective. Offensive operations are the means by which a military force seizes and holds the initiative, while maintaining freedom of action and achieving decisive results.
3. Mass: the effects of overwhelming combat power at the decisive place and time. To mass is to hit the enemy with a closed fist, not poke at him with the fingers of an open hand.
4. Economy of Force: the judicious employment and distribution of forces. No part of the force should ever be left without purpose.
5. Maneuver: place the enemy in a position of disadvantage through flexible application of combat power.
6. Unity of Command: for every objective, seek unity of command and unity of effort. Unity of command means that all forces are under one responsible commander.
7. Security: never permit the enemy to acquire unexpected advantage. Security enhances freedom of action by reducing vulnerability to hostile acts, influence, or surprise. Security results from the measures taken by a commander to protect his forces.
8. Surprise: strike the enemy at a time or place or in a manner for which he is unprepared. Surprise can decisively shift the balance of combat power.
9. Simplicity: prepare clear, uncomplicated plans and concise orders to ensure thorough understanding. Everything in war is very simple, but the simple thing is difficult.

U.S. Army tactical doctrine during the early years of the nineteenth century, while not as clearly or concisely laid out as the material summarized from FM 100-5, did exist. Army doctrine and operations were heavily influenced by military experiences during the American Revolution, observing the Napoleonic Wars, and experiences growing out of the Mexican–American War (1846–1848). The first half of the nineteenth century generally saw close-order infantry assaults with bayonets gleaming, cavalry charges with sabers flashing, and direct fire by smoothbore artillery placed in the front of the line, as the appropriate manner of giving battle and achieving victory. These proscriptions were followed during the first 2 years of the Civil War (1861–1865) with devastating casualties. The tactics of 1861 slowly gave way to more discrete tactics by 1863 (Griffith, 1989). Both Union and Confederate commanders saw appalling casualty rates using the older tactics against the commonly used and technologically superior rifled musket. Smoothbore artillery was no longer able to mass in the front of an infantry line and pound the enemy. The range of the rifled musket was equal to that of the smoothbore

artillery, allowing the infantryman to pick off gun crews at will. The time-honored cavalry charge to break the infantry line was no longer feasible due to the long range and accuracy of the rifled musket. The infantrymen could easily decimate a cavalry charge before it was well underway. Finally, an infantryman armed with the rifled musket could destroy a close-order infantry charge well beyond the traditional 100 yard firing range of the old smoothbore musket.

By the last years of the war, tactics had adapted to the effectiveness of modern rifled arms. Infantry tactics were modified to open-order skirmish lines with available cover used whenever possible. Defensive positions were usually fortified with extensive entrenchments. Even short-term camps were usually protected by prepared rifle pits, picket posts, and videttes.

Although used extensively throughout the war, artillery, by 1863, became a defensive weapon, rather than the offensive weapon it had been in 1861. Artillery was required to move behind the line of defense to be effective because of the increased range of the rifled musket. Artillery tactics of the Civil War always used direct fire. Indirect fire would not be developed for another 40 years. The direct fire concept relegated the artillery to a defensive role throughout the Civil War and for many years to come, even though long-range accurate rifled artillery was common in the later years of the Civil War and into third quarter of the nineteenth century.

Of the three combat branches, cavalry made the greatest adaptation during the latter part of the Civil War, continuing these tactics during the "Indian Wars." In battle it moved from the close-order charge meant to break or outflank a line to a mobile unit that could move quickly to the scene of action and dismount to fight as light infantry. With the advent of breech-loading single-shot and repeating carbines, cavalry firepower increased dramatically. Increased firepower and mobility allowed the cavalry to regain a usefulness on the battlefield that it had lost with the introduction of the rifled musket. Cavalry was also used extensively throughout the Civil War and "Indian Wars" as a fast and efficient scouting and intelligence gathering arm. Its mobility allowed units to range far and wide around larger columns to protect the marching columns and scout opponents' movements.

The U.S. Army was downsized and reorganized in 1866 to reflect a change in mission at the end of the Civil War. During the late 1860s and the early 1870s, the Army began to assess and develop a new tactical doctrine in response to their role as a frontier protector. One officer, Emory Upton, is credited with developing a new system of tactics for the Army during this era. However, Upton only headed a board of officers that, for the first time, studied all three combat branches and developed a compatible system of tactics for them (Jamieson, 1994). This system, an outgrowth of both experiences in the Civil War and a study of European armies, focused on two major changes in the way the Army went into battle. First, companies were reorganized so that the men marched and maneuvered in columns of fours. That is, groups of four men marched and moved together, which was the forerunner of our modern squad system. Groups of fours could then be combined into units of 8, 12, or larger numbers for specific tasks. Again this was a forerunner of the squad and platoon system used by today's Army units. Upton and his board also introduced the concept of open-order skirmishing. A direct result of their Civil War experiences of facing rifled musket fire in massed lines that resulted in large casualty and wounded rates, the board recognized the necessity of opening the line to minimize casualties caused by the more effective range and greater firepower of the breech-loading firearm.

Two other tactics were developed as a direct result of Indian fighting. First was the recognition that the most effective time to score a victory over the mobile Plains warrior was during his least mobile moments. The Army high command, building on its frontier experiences in the years preceding the Civil War, saw that the Plains Indians were the most vulnerable during the winter, when the lack of good forage and raw weather prevented the movement of the various bands. Second was the concept of a multipronged attack on a band or village. This concept involved splitting commands, whether wings of battalions, battalions of regiments, or even whole regiments of larger forces, into elements that would maneuver to encircle the subject of the action. For the most part, the tactic was successfully

employed in numerous instances. It failed on occasion, particularly at the Little Bighorn.

There are essentially two types of battlefields: siege and transitory. The archaeological evidence of warfare will be similar between the two in some respects. The siege site can be expected to be associated with towns or fortifications where one of the combatant parties fortified themselves and where the other party was attempting to acquire that locale. The defensive side of a siege battlefield should be associated with some type of relatively permanent fortification, or a town with defenses thrown up around it. Civil War sites like Vicksburg or Petersburg are examples of siege sites. The archaeological features associated with a siege site would be fortifications, artillery positions, long-term camps for both combatants, and extensive trash deposits. Normally large bodies of men were employed in a siege; therefore, the camp and trash-related artifacts should be extensive. The possibility of a formal burial ground should not be overlooked in a siege situation.

The transitory battlefield, which is the most common, is more ephemeral in nature. Normally these involve a limited engagement of opposing forces in both time and space. This battlefield type should not be associated with permanent fortifications; rather, temporary breastworks may be found. Camps and burial areas may be found near the battle site. The primary archaeological deposits associated with a transitory battlefield are parts of uniforms, equipage, and especially spent cartridges, bullets, artillery shells, and other weapons, such as arrows or spears.

Where similar cultural groups or a cultural group in conflict has fought a battle, the artifact patterns may be more difficult to identify. Yet combatant pattern differences should be discernable. The Revolutionary War battlefield of Saratoga is one example. Here Snow (1981) was able to identify British and American areas even though the cultural parentage of both groups was similar. Using musket ball finds at Monmouth, New Jersey, Silivich (1995) was also able to sort out British and American lines. Haecker and Mauck (1997) used artifact patterning to identify and define American and Mexican attack lines at the Mexican–American War site, Palo Alto. The Civil War pitted elements of the same culture against one another, but opposing combatant camps and positions can be fairly easily identified through the material culture remains (Ripley, 1970). The same can be said for military forts and encampments. The material culture remains can often be associated with specific occupations, even though they may have been different cultural groups (Maxwell and Binford, 1961; Miller and Stone, 1970; Pollard and Oliver, 2002; Rose, 2005).

Battlefields of the "Indian Wars" have yielded interpretable artifact patterns. The cultural differences in the manner and practice of warfare by U.S. Army trained personnel versus various Native American groups are clearly delineated in the artifact dispersal patterns at Indian Army battle sites. Archaeological investigations of the site of the Battle of the Little Bighorn provide the most completely documented example (Scott et al., 1989; Fig. 3). Other investigations have shown that the battlefield pattern (Fox and Scott, 1991) holds up well in both earlier and later Indian versus Army battle sites. Pratt (1995) has demonstrated this at the Battle of Fallen Timbers, while others (Adams et al., 2000; Cruse, 2008; de Meyer and Pype, 2004) have also shown the pattern's reliability in the archaeological record of battlefields worldwide. Archaeological investigation of aircraft wrecks and naval battle shipwrecks (Cantelas, 1993; Holyoak and Schofield, 2002; Jeffery, 2004; Legendre, 2001) is demonstrating the potential for recovery of information related to site formation and is expanding our definition of the study of conflict sites (Conlin and Russell, 2006).

The Soldier's Lifestyle

Occasionally, archaeological investigations of military sites yield the physical remains of those who soldiered for their country or culture. Human remains are as much a part of the archaeological record of the military past as weapons, uniform buttons, or mess ceramics. Only a few studies have been undertaken on human remains, primarily because they are so rarely encountered in military sites. The majority of the remains that have been studied are those burials associated with battles (Legg and Smith, 1989; Pfeiffer and Williamson, 1991; Scott et al., 1998; Starbuck, 2002). These

Fig. 3 A metal detector team sweeps a part of the Little Bighorn Battlefield National Monument, Montana, to record the patterns of artifacts associated with the 1876 iconic confrontation between the 7th Cavalry and the Lakota and Cheyenne (photograph by the author)

studies, often of only one or two skeletons, are beginning to flesh out, so to speak, our understanding of the rough and tough lifestyle of the bygone soldiers and unequivocally demonstrate they died of violent and sometimes horrific trauma. The osteological studies illustrate that most of these young men suffered from poor dental health, dietary stress, bad backs, numerous antemortem diseases, injuries, and trauma before their lives were snuffed out in a violent moment on a field of battle (Dailey and Cockrell, 1972; Jacobs and Owsley, 1991; Legg and Smith, 1989; Owsley 1994; Owsley et al., 1988; Sledzik and Moore-Jansen, 1991; Willey, 1996; Willey et al., 1996; Willey and Scott, 1996).

Conclusions

The focus of this chapter is on the behavior of a subcultural unit, the Army, and how the Army leaves behind an interpretable archaeological record at various sites. The emphasis here is primarily on the Civil War and post-Civil War American-Victorian military, but the approach is applicable to investigations of military sites from around the world and at different time periods. Historical and archaeological studies of military sites of the American-Victorian era have demonstrated that they will differ from the parent culture in the presence of institutionalized architecture at permanent habitation sites. The structures will be hierarchically organized and defined. Structural artifacts will be present and there will be limited variation in their types. Artifacts of clothing and equipment will reflect the site's military nature and will show the stratified and ranked nature of the military.

Officers' personal artifacts will be of better quality than other military personnel. Their artifacts will show greater social and economic status, and because of that status and relative wealth, they should show more diversity. Other ranks will show less diversity than the officers. They will show greater conformity to regulation, and personal goods should be of lesser quality than the officers' goods.

Sites exhibiting evidence of conflict will have patterns of artifact deposition coincident with the training provided to the participants. Combatants fight as they are trained and under the rules of that cultures' perception of warfare behavior. Opposing combatant positions, movement, armament, and methods of warfare should be discernable in the artifact deposition pattern.

In essence, military sites will be revealed in the archaeological record by their institutionalized architecture, equipment, and patterns of artifact deposition. They will also reflect the tenets of the parent culture in the artifactual record. Personal goods will reflect social and economic status within the military community and the culture at large. Artifacts and patterns of deposition will also reflect the role of the military in society—the making of or prevention of war.

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Men–Women and Children: Gender and the Structuring of Historical Archaeology

Andrea C. Vermeer

Introduction

The integration of gender into archaeology as a "structuring principle fundamental to interpreting past societies" (Gilchrist, 1991:499) is still incredibly new to the field. Archaeologists may have become more attentive to their assumptions regarding gender in the years since Conkey and Spector's (1984) important treatise, "Archaeology and the Study of Gender," but only 18 years ago, Alison Wylie (1991) still had cause to ask, "Why is there no archaeology of gender?" While historical archaeologists had a timely response to her plea with the publication of *Gender in Historical Archaeology* (Seifert, 1991a), the newness of the consideration of gender made this response varied with regard to what constituted appropriate goals, stemming from differences in the conceptualization of gender and resulting in differences in the methodological approaches to its archaeological study. This variation can be broken down into three basic types of studies: (1) those seeking to establish the material correlates of one or more gender-based groups or constructions, (2) those interpreting archaeological assemblages through gender as a principle that structures society, and (3) those drawing upon the role of gender in constructing identity.

Following a brief synthesis of the conceptual issues that have challenged and motivated the study of gender in archaeology, this chapter provides a survey of each of the three types of studies and highlights relevant theoretical and methodological issues within the context of the continuing development of gender studies in the field of historical archaeology. This survey, primarily drawing upon North American examples, should quickly make clear that the three types of studies have not been mutually exclusive, in that the emphasis of each is necessarily present, whether explicitly or implicitly, in the background of the others. One cannot assess how material culture reflects gender without recognizing that gender imposes some type of order upon human beings and, in that sense, constitutes a structuring principle, nor without recognizing that structuring is related to the identity, constructed by the self or by others, of men as men, women as women, or other gender categories as other gender categories. Because these studies are archaeological in nature, examinations of gender as a structuring principle or its relation to the construction of identity necessarily address at some level the material manifestations of these functions. Recognition, however, of the overlap between and integration of these emphases has occurred to differing degrees. Increases in both have had a positive effect on the evolution of the study of gender in historical archaeology.

Gender Is as Gender Does: Concepts and Reconceptualization

In responding to her own question regarding the absence of an archaeology of gender, Wylie (1991:34) maintained it was due partially to the "commitment to theories which focus on other

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classes of variables as the primary determinants of cultural behavior" and which often are assumed, unnecessarily and incorrectly, to be incompatible with the consideration of gender. Primarily, however, she cited the projection of recent Western gender structures onto the past, resulting in and reinforcing the perception that gender roles were biologically determined, therefore stable, and therefore requiring no further development of resources for their study. The assumption that gender roles are biologically determined is linked to what were, historically, difficulties fundamental to gender studies in a variety of fields: the conflation of gender with sex, a biological given, or with sexuality, a personal, projected, or perceived identification with sexual preference, practice, or relations. Gender is neither of these, but it may invoke both.

Gender is the cultural construction of "man," "woman," or other related categories made up of social and cultural ideas about what each category means (gender ideology) and the appropriate roles for each category (gender roles). These constructions are incorporated into the ways individuals perceive themselves or are perceived by others to fit into a category (gender identity) (Conkey and Spector, 1984:15; Scott, 1994a:10). Because gender is sociocultural and not biological, it is not universal or inherently stable, and it does, therefore, require the development of resources for its study. Understanding gender as sociocultural construction means that an archaeology of gender must engage the culturally specific processes and effects of that construction, moving well beyond biological ties. Despite, then, the major impetus provided by feminist voices (e.g., Conkey and Spector, 1984; Engelstad, 2007; Gilchrist, 1991; Spencer-Wood, 1991, 2001; Voss, 2006; Wylie, 1991, 1994, 2007) to an archaeology of gender, reference to a woman or women, finding women in the archaeological record, or even studying an individual woman or group of women as the primary subject of an archaeological study does not automatically render it gender archaeology. Only when "woman" and other gender constructions are examined in relation to the processes and effects of creating them can a study be defined as such.

Historical archaeology, in this respect, benefited from its relatively late entrée into gender studies. When the authors of the papers in *Gender and Historical Archaeology* were asked to contribute to the volume, "they were asked to move beyond looking for women in the archaeological record through identifying artifacts associated with women; they were asked to stretch further and to examine the relationship between their data and gender as a structural principle of culture" (Seifert, 1991b:2), indicating that even this early foray into gender in historical archaeology was well informed by gender theory. Even so, historical archaeologists have struggled to make operational its salient points, most commonly by enlisting the notion of gender-exclusive material culture (see below). The idea that such material culture exists stems largely from "separate spheres" gender ideologies that assign men the qualities of public, political, production, active, and culture and women those of private, domestic, consumption, passive, and nature (reproduction). These ideologies were historically constructed as binary oppositions ultimately based on biology/sex, thereby reducing the real-world complexity of gender and disguising the shared usage of material culture, albeit sometimes in different ways (Gilchrist, 1994; Kerber, 1988; Wurst, 2003). Reliance on binary oppositions has colored even those studies that identify the crossing of members of one gender group into the realm of another; these studies universalize those realms by supposing that infiltration occurs instead of recognizing "infiltration" as an indication that gender categories are not stable. The result is the "[piling up of] one cautionary tale after another, hoping to smother the flawed logic beneath its weight" (Wurst, 2003:229).

In 2003, Wurst noted, "To date, most of our attention has focused on defining what gender is, and the corollary, where or how gender can be linked to the material world. I find it useful in this context to raise the question of what gender does" (Wurst, 2003:231). By reconceptualizing what gender is as what gender does, the processes and effects of gender construction come to the forefront of archaeological studies. Processes and effects, of course, are not tangible and therefore cannot be recovered as artifacts from the archaeological record. Material culture, however, that conveys these processes and effects is tangible; thus in regard to those who cannot speak, material culture is necessary to understanding these processes and

effects, as well as adherence to or manifestations of gender roles and ideology and how these might have been or not been expressed individually or within groups. Despite, therefore, any shortcomings that have been evinced in the material-correlate class of study, such studies and the cautionary tales they generated represent important steps toward an appropriate methodology for studying gender through historical archaeology.

Presence over Process: Material-Correlate Studies

Studies that can be classified under this heading are those that have emphasized the identification of the archaeological signatures of gender groups in the context of a specific historical situation. These material culture studies are typically couched within a discussion of pertinent gender ideology, roles, patterns, and/or interactions, which alludes to gender as a structuring principle. Frequently, though, the material culture study and the discussion have not been successfully linked, so that in the end, the material culture points to presence and not process.

In her study of women in the Spanish New World, for example, McEwan (1991) establishes late-fifteenth-century and sixteenth-century Spanish gender ideology as one in which women were expected to be ordered, restrained, pious, and chaste and to invest their time in domestic and religious endeavors. She addresses these ideological expectations as a background for her contention that Spanish women were powerfully influential in their homes and thus in disseminating Spanish culture among their Native American and African-American domestic workers. Additionally, she notes that Native American and African-American wives "assumed the roles traditionally held by Spanish women with regard to food preparation, child rearing, and homemaking" (McEwan, 1991:39). Based on this information, she establishes the material correlates of Spanish women as those of a domestic nature, identifies the material correlates of Native American women who married Spanish men also as largely domestic and including ceramic cooking pots, storage vessels, stone manos, metates, and manioc griddles, and discusses the potential for pottery to represent African-American women who married Spanish men.

The material correlates, though associated with Spanish gender ideology, are not considered as a function of what gender does. Concluding, for example, that Native American and African-American women were agents of acculturation without assessing how gender structured their cultures prior to involvement with the Spanish insinuates that Spanish gender constructions mirrored their own, missing the ways in which Spanish gender constructions may have restructured the lifeways of Native and African-American women and how material culture might reflect, for example, the extent to which such restructuring occurred. Similarly, interpreting intermarriage as a means of "stabilizing and converting the Native element" (McEwan, 1991:36) to Christianity misses the possibility that intermarriage was a means of maintaining existing gender structures within Spanish society and how material culture might shed light on the importance of such maintenance, for example, in support of a particular mode of production.

Like McEwan, Jackson (1994) searches for the means to identify women in the archaeological record, in this case, of Russian America during the mid- to late 1800s in relation to the fur trade. Though much background information is provided that points to the gender roles of the Tlingit and other Native Alaskans at that time, the primary goal of the study is to demonstrate how food preparation and garment making, activities that "belong to the female domain" (Jackson, 1994:30), appear archaeologically in general and in relation to stylistic attributes. Though she notes that Tlingit women participated in the fur trade and that a sexual division of labor existed in at least one Native Alaskan society, Jackson uses these only to support the arguments that women engaged in fur-trading activities and that their participation can be evidenced by cloth, clothing, and related paraphernalia, with the implication that eventually archaeologists can determine gender roles within the fur trade. That this study is geared toward finding women is indicated by Jackson's argument that if women are not identified through their association with specific artifacts, then "artifacts remain in a disconcertingly gender-free environment" (Jackson,

1994:30). If gender is considered a principle structuring society, no artifact can remain in a gender-free environment.

Studies focusing on finding specific groups by establishing their material correlates have often failed to meet the challenge of avoiding circular reasoning in interpreting gender in the archaeological record. If, for example, a known gender ideology dictated that women should do housework, based on that ideology, one might assume that a woman would leave behind an iron, then use the iron as the basis for suggesting a woman was present at the site and adhered to that ideology. What that might mask is that the man who actually used the iron operated in opposition to that ideology. The challenge is then posed of identifying who contributed what to a given assemblage. This difficulty is highlighted by Starbuck's (1994) study of gender at eighteenth-century U.S. military sites. He discusses the inability to locate women's artifacts, noting that "in military settings, men and women were apparently often using and sharing virtually the same material culture, so their identities are not easily distinguishable archaeologically" (Starbuck, 1994:124). Starbuck's study, in noting the potential for shared material culture between gendered groups, reinforces what has been problematic in many archaeological studies considering gender, which is that artifacts are interpreted by default as related to men's activities, unless they relate specifically to women's fashion, hygiene, or medical conditions or to domestic activities. Interpreting gender in this way eliminates not only women who might have smoked pipes or participated in agriculture but also men who might have sewn or prepared food.

The assumption that artifacts are "male" or "female" conceals the fact that many artifacts are "both" and, therefore, suggestive of the interactions between and activities shared by men and women. This problem was most recently tackled by Spude (2005) with regard to prostitution-related assemblages, where difficulties in interpretation are compounded by the knowledge that both women and men were involved in the creation of these assemblages and sharing several activities, including eating, drinking, smoking, and sex. She suggests that the archaeological identification of gender categories should be limited to those artifacts, such as earrings, cosmetic containers, douching paraphernalia, suspender buckles, and jeans rivets that overwhelmingly point to "male" or "female." Though Spude's approach may prove useful for identifying contributors to a site and the site type, ultimately the use of material correlates to identify the presence of a member of a given gender category, i.e., to find women or men, in order to analyze the relationships of an assemblage to the resistance to or maintenance of gender roles and ideology has tended to reify gender roles within society into the stable and universal entities that they are not. It was the recognition of the potential for incorrectly assuming and reifying gender roles that led many historical archaeologists to refocus their study of gender by considering gender as a structuring principle.

Process over Presence: Gender as a Structuring Principle

The dangers of assuming and reifying gender roles, as has often occurred in material-correlate studies, were elucidated in one of the earlier historical-archaeological studies to address gender as a structuring principle of society. Purser's (1991) study of gendered patterns of mobility between mining camps along Port Wine Ridge in California led to the discovery that the pattern of women's visiting was more than just a domestic-ideologically approved activity. These reciprocal visits served social and practical functions in maintaining community. Unlike men's visits, which occurred over short time frames in saloons, general stores, and other public venues, women's longer visits to relatives and friends "created and maintained sets of social ties that provided some continuity to the community as a whole. Some of these networks linked and reinforced kinship ties; others mirrored, and in some instances presaged, sets of small business partnerships seen among the men of the ridge community" (Purser, 1991:11). Additionally, Purser found, during the summer and early fall, that women residents of one of the mountain mining camps, Grass Flats, would visit relatives or friends in the agriculturally based foothill settlements with an older child, who she would leave there until just before winter. In this way, the "mountain household fed one less mouth during the lean, non-mining season and

possibly provided additional labor to the valley household during summer harvests. It also linked the mining-camp household with a supply of fresh vegetables, fruits, and meat" (Purser, 1991:12). In the spring, valley residents would visit their mountain counterparts to take advantage of the recreational opportunities afforded by the mountain setting.

Perhaps more important in this study than the elucidation of these community-related functions, however, was the exposure of several originally made assumptions that, without further analysis of the data, would have rendered Grass Flats women as acting out fixed roles associated with Victorian gender ideology. This caused Purser to reevaluate her earlier study of the women of Paradise Valley, Nevada, in which several of these assumptions had been carried through the examination of relevant historical documents. These assumptions were that Grass Flats women were simply participating in activities approved by Victorian domestic ideology, an assumption that Purser (1991:13) attributes to the "danger inherent in the rich body of comparative historical literature available to historical archaeologists and the seeming familiarity of the subject matter." It was assumed that gendered archaeology had to be considered at the household level and that gender was a specialized topic instead of a structuring principle. Regarding the latter, Purser notes, importantly:

> The intellectual shift described [in this study] only begins to move from excavating "women" in "households" to perceiving gender relations as an historically constituted structuring principle inherent throughout society. It raises questions about what is being excavated, and why, in specific contexts, but cannot yet answer those questions fully. These questions are not about "doing" versus "not doing" gender in historical archaeology, or how to "find" women or men in the archaeological record. Rather, they examine the extent to which recognizing the gendered character of social life problematizes archaeological concepts like household, community, or human mobility.
>
> In raising such questions, the personal transition from looking *for* women to looking *through* gender also begins to articulate the critical potential of gendered research with other, parallel arguments for critical, self-reflexive approaches in historical archaeology (Purser, 1991:13; italics in original).

Several studies have since reflected positively on the points raised in Purser's study: that gender functions as a structuring principle at multiple levels of society, that recognizing gender as such creates a significant shift from material-correlate studies in the goals of archaeological excavation and the interpretation of material culture, and that looking through gender allows gendered research to be articulated with that of class and ethnicity, principles also considered in self-reflexive approaches in historical archaeology.

Multilevel Approaches

The need to consider gender as a structuring principle of society at multiple levels was aptly demonstrated by Hardesty (1994) in his prospectus for an engendered archaeology of the nineteenth-century American mining West. Within this prospectus, Hardesty presented historical data to illustrate the organization by gender of households, communities, and mining districts and archaeological data to suggest how such organization might be reflected in the material record. At the household level in the mining West, gender frequently structured household activities in ways that are visible archaeologically. Citing Blee (1991), Hardesty notes, for example, that all-male residences tend to have a low percentage of liquor-related artifacts because Victorian gender ideology abided public drinking by men, who did not therefore have to indulge at home. He additionally suggests that archaeology may be used to study the degree to which households were organized by that ideology. Victorian gender ideology further organized community geography, which also can be examined archaeologically. Hardesty cites, for example, the segregation of women who operated outside of Victorian gender ideology through prostitution into red-light districts. Additionally, he presents evidence for the structuring by gender at the community level in the correlation between (1) the absence of special-purpose buildings, (2) the presence of special-purpose buildings mostly for men's activities, and (3) the presence of special-purpose buildings used for both women's and men's activities and (1) mining towns that experienced a quick boom and bust, (2) working-class mining towns of greater duration with a well-defined class structure but predominated by men, and (3) mining towns of yet

greater duration with a well-defined class structure and a more balanced sex ratio, respectively. Hardesty cites the above-mentioned study by Purser (1991) to support the idea that gender structures mining districts, but also notes regional gendered patterns, such as those "centered around a town with a variety of outlying settlements…Most of the women, for example, lived either in the town, with families at outlying ranches, or at toll stations managed by families. Men occupied the working-class satellite settlements clustering around the mines or mills scattered throughout the district" (Hardesty, 1994:141). The evidence for the organization by gender at each level supports Purser's contention that an archaeology of gender should not be limited to household studies.

While Hardesty's and Purser's studies make clear the effectiveness of a multilevel approach to gender organization in the mining West, the necessity of considering multiple levels in other contexts has been corroborated elsewhere. Spencer-Wood's (2006) archaeological approach to American Utopian communities indicates that the structuring of society by gender is not only evident where Victorianism constituted the dominant narrative. Though her approach uses the separate spheres dichotomy as a basis for comparison, because some of these communities promoted gender equality, this study is able to tread a relatively new path. It should also be noted that in doing so, it bolsters the argument against the dichotomy as stable or natural. Spencer-Wood explains the ways in which the landscapes, intra- and interspatial building layouts, their functions, and associated artifacts in sites associated with Utopian communities are reflective of practices associated with Utopian ideologies, particularly gender ideologies. The presence of one or more community-scale buildings, for example, as might be indicated by large foundations, could support, with the appropriate suite of artifacts, the practice of cooperative housekeeping, which occurred in several Utopian communities promoting gender equality because it freed women to pursue nondomestic work. To interpret the archaeological data, then, requires viewing them through gender, but it also requires doing so at multiple levels; in this case, examination of a single household instead of the community landscape would miss this indication of gendered processes.

Perhaps one of the more interesting and instructive studies of gender to move beyond the household level is Kryder-Reid's (1994) examination of the nineteenth-century, all-male religious community of the Redemptorists, a study that clearly shows gender not to be equated with biological sex through a case in which gender structured society even where members of only one sex were present. The Redemptorist community associated with the St. Mary's site in Annapolis, Maryland, comprised ordained priests and lay brothers. It was a cloistered community in which the priests trained students for ordination, whereas the brothers committed to a life of "service and bodily labours… constant and careful in discharging the various domestic employments, always mindful that they have come to serve" (quoted in Kryder-Reid, 1994:104).

Despite the Redemptorist promotion of equality between priests and between brothers, the Redemptorist Rule made clear that a hierarchy should be present between the priests and brothers, with the latter ranking below even those studying to become priests. Using historical documents from the Redemptorist community and drawing on the Victorian ideal of True Womanhood, which promoted piety, purity, submissiveness, and domesticity, Kryder-Reid shows that the community was organized through the engendering of the priests and brothers with masculine and feminine roles and attributes, respectively. Though both groups were expected to be pious, chaste, and submissive to the Rule, the latter meant that the brothers had the added charge of being submissive (reverent and servile) to the priests. Furthermore, the duties of the brothers were largely domestic in nature: infirmarian, or nurse, gardener, porter, refectarian, cook, tailor, sacristan, caller, and Brother Procurator (Kryder-Reid, 1994:105–106, 110).

Kryder-Reid concludes the study by discussing the challenges of identifying the material culture associated with each gender group. The challenge of avoiding circular reasoning, as discussed above, is implied in her statement that it was impossible to know whether a collar button recovered from the St. Mary's site, from a collar that was only supposed to be donned by priests, represented "an obedient priest or a renegade brother" (Kryder-Reid, 1994:108). Furthermore, the communal nature of the deposits from features such as cisterns prevented

association with either one gender group or another, making it difficult to test adherence by the brothers to domestic duties. Though she uses the example of minimally processed meat to suggest that food preparation was conducted in the cloistered community by the brothers as opposed to the public butcher and finds evidence in archaeological and historical landscape data that point to the domestic duties that would have been performed by the brothers, she acknowledges that the material-cultural challenges are steep. Hence this study, like Purser's, Hardesty's, and Spencer-Wood's, is largely theoretical.

Social Structure and Material Culture

A number of studies, however, have innovatively interpreted material culture through the lens of gender as a structuring principle. One of the earliest and most well known of these is Wall's (1994) analysis of ceramics from late eighteenth- through mid-nineteenth-century households in New York City. This period encompasses the transition to a dominant (Victorian) ideology of separate spheres marked by the removal of in-home businesses to separate locations, the separation of residential districts from business districts, and more pronounced differences in prescribed gender roles. It had often been suggested that middle- and upper-class women crystallized the domestic sphere only after their husbands began to leave them for the public sphere on a daily basis. One result of this crystallization was the ritualization of family meals, including their presentation, and was supposedly catalyzed by the separation of the family during the day. By comparing the stylistic attributes and composition of chronologically separate ceramic assemblages from middle-class and wealthy households spanning the decades between the 1780s and 1830s, Wall (1994) was able to demonstrate that women were active participants in constructing their gender roles, which in turn structured social practices. Changes in decorative motifs toward the religiously influenced Gothic style, the increased cost of the dishes used for family meals, and a move toward matched sets of dishes prior to the physical and conceptual separation of home and workplace and throughout the period of study indicate that women were not simply responding to the departure of men to the public sphere. Rather, they were actively involved in the structural transformation of society by participating in the creation of their gender roles.

Goodwin (1999), similarly, assigns an active quality to the gender roles of merchant-elite women in seventeenth- and eighteenth-century Massachusetts. In her study of merchant society in this spatiotemporal context, she contends that gender roles associated with mannerly behaviors, as outlined in contemporary prescriptive literature, complemented each other to reproduce merchant society and to provide the merchant class with a means for maintaining the desired separation from what they considered lower classes. Goodwin suggests that while it was typically men who engaged directly in the trade and business negotiations of merchant society, women, by putting on and presiding over events such as teas and dinners where alliances, financial, marital, or otherwise, could be made, negotiated the social networks that upheld and reproduced it. She proposes that the material culture of merchant society should be interpreted through the lens of mannerly behaviors and their broader role in maintaining the lifeways of that class.

Class, as Wall and Goodwin indicate, was a component of the ability to create the gender roles identified in their case studies. This point is reinforced by Gibb and King (1991) and Bell (1995), who used the spatial distribution of material culture to assess the adherence by English colonists to seventeenth- and eighteenth-century English gender ideologies and associated roles. In analyzing three archaeological homelot sites in the Chesapeake Tidewater region, Gibb and King found that specialized activity areas, which they interpret as "evidence of a sexual division of labor expressed in the distinction between home- and commodity-production" (Gibb and King, 1991:128), were most, though not strongly, pronounced at the wealthiest of the homelots. They concluded that gender organized the homelots in relation to labor and space but noted that the way this organization occurred was based on what the wealth of the landowner could support. In wealthier households, landowners could afford to sustain the personnel required for specialization of tasks, who in turn produced sufficient quantities of goods to maintain the wealth of the

landowner. Part of this arrangement, they note, was the involvement of women in home production and men in commodity production. Gender, therefore, structured social organization by promoting the accrual and maintenance of wealth in households that could afford the gendering of labor. Such specialization could not be supported by those of lesser means. Bell (1995), working in the same region on a site dating to the early- to mid-eighteenth century, found that at Flowerfew Hundred Farm, many of the artifacts were reflective of the middle class, but the spatial distribution of the artifacts and lack of specialized activity areas were more consistent with a lack of middle-class ideals. Her conclusion implies that although English gender ideology may have been influential, it was not fully accepted by all, including members of the middle class.

The notion of resistance to the structuring of society by gender per the dominant ideology, as implied by Bell's conclusion, has gained ground in the historical archaeology of gender as it moves away from simple dichotomies. Casella's (1995) study of nineteenth-century Tasmanian Female Factories has its background in the Victorian ideal of True Womanhood, but only to show how women in these reform institutions were constructed in opposition to that ideal. Importantly, her study demonstrates that gender is not a binary category, as these women did not cross over into the male sphere but into an alternative one (there is nothing ideologically male about crime or prison), that these women, like the Redemptorists of Kryder-Reid's study, constructed gender in a primarily single-sex setting, in this case to express power instead of submissiveness, and that such construction had an effect on the adherers to the dominant ideology, structuring their actions and responses as well.

Despite the fact that most of the women in the Tasmanian Female Factories had committed the crime of thievery, they were sexualized through being conceived of as and termed whores, cementing their non-womanhood in the eyes of prison officials. The prisoners built on this image through sexual displays, though Casella (1995) notes that it is unclear whether these displays included sexual acts. The implication of such, however, was enough for prison officials, who noted alternative gender identities (and possibly sexuality), referring to some of the prisoners as "men–women" and noting the propensity of other prisoners to primp for and fight over their attentions. As a result, during the mid-nineteenth century, prison architecture at the female factories was revised to incorporate double-room solitary cells that allowed prisoners to sleep and light to work by while giving officials the means for inmate surveillance and separating the women.

Archaeologically speaking, gender as a structuring principle over multiple levels is manifest in the prison landscape. The dominant gender ideology structured greater society and demanded that these women, who as criminals could not be "Women," be separated from it, which is physically manifest in the presence of the prison. The construction of gender by the prison population eventually structured the internal space of the prison. At both levels, the architectural components of the prison are indicative of resistance to the dominant gender ideology. As Casella (1995:38) notes, "Why would prison officials bother to fortify a fenceline, brick over a window or erect a lamp post in any particular location? If institutional containment is understood to be a constant, fluid and partial negotiation of power, then the architectural features were responses or challenges to subordination as much as they were methods or statements of domination."

Landscape and architecture have been similarly used by other historical archaeologists to examine the relations between gender, power, and space. In Delle's (2000) study of late eighteenth- and early nineteenth-century Jamaican coffee plantations, for example, he maintains that despite clearly unequal class relations between the slaves and enslavers, the engendering of spaces, resulting in enslaved women's control of provision grounds where they grew food to sustain their families and to sell at market, afforded them some sense of autonomy and empowerment. Gilchrist (1994), in her analysis of England's medieval nunneries, examines the ways in which the surrounding landscape and the architecture of the nunneries were structured by gender, particularly in comparison with male monasteries. She argues that the ways these elements were manifested were intertwined with the gender constructions of the "social group to which [the nunneries] were predominantly linked: the local gentry" (Gilchrist, 1994:188), and with power relations between gender groups and within the nunneries during the period in which they

operated. Archaeological gendered landscapes in the United States are the subject of a recent edited volume (Rotman and Savulis, 2003) that explores these resources in numerous and varied contexts, from the Shaker communities of the 1830s and 1840s (Savulis, 2003) to the creation of the Vietnam Veterans Memorial in the early 1980s (McGirr, 2003), and firmly establishes the role of gender in structuring the material and the spatial along with realms of activity.

As noted above, however, and as was apparent from many of the studies described thus far, gender does not work alone in structuring society, and historical archaeology continues to undergo the process of understanding how gender interacts with other constructions, most commonly class and ethnicity/race. Attention to this combination of principles is evident in the titles of such edited volumes as *Those of Little Note: Gender, Race, and Class in Historical Archaeology* (Scott, 1994b) and *Lines That Divide: Historical Archaeologies of Race, Class, and Gender* (Delle et al., 2000), which show that historical archaeologists have engaged these topics for some time. A shift, however, has occurred toward an understanding of gender as an isolated principle to one that is inextricable from class and ethnicity in the process of structuring society.

Gender, Class, and Ethnicity

In earlier years, the trend toward understanding the interactions of gender, class, and ethnicity manifested itself in the viewing of one construction through one or both of the others. In Hardesty's article on engendering archaeology in the mining West, for example, he says that the ways in which "mining towns were organized by gender [have] to be interpreted within the context of class divisions" (Hardesty, 1994:131) and that "emigrants carrying quite different cultural and social traditions [affected] the way in which gender structured the community" (Hardesty, 1994:134–135). Similarly, Wall (1999:102) "explor[es] the extent to which class and ethnicity…structured the construction of gender in the [mid] nineteenth-century metropolis [of New York City]" by comparing data from her 1994 study and another middle-class household with material culture from a working-class tenement. Griggs (2001:83), alternatively, considers how "household makeup and economic strategy were influenced by ethnicity and gender" in the working-class neighborhood of New York City's Five Points in the middle to later part of the century. Using the types and qualities of sewing tools in combination with the quality of textiles recovered from archaeological deposits, Griggs found that working-class Irish families on Block 160, often headed by widows or other single women, needed to recycle and reuse textiles and remnants to supplement household income and meet their needs. On the other hand, Jewish households, which were often more standard nuclear families in which men and women could pool their incomes and divide their labor among them and their children, were financially better off.

These early studies defined gender, class, and ethnicity as interacting structuring principles but are characterized by a unidirectional approach of looking at one principle through others. Recognizing that this approach may give the illusion of primacy to one principle over the others in structuring society, a recent framework developed for the study of these principles (Vermeer, 2006) has called for a multidirectional approach that recognizes the complexity of these interactions in light of works that have called out, for example, class as a function of gender (e.g., Hill, 1993), or the inseparability of gender from race (e.g., Glenn, 1992). Additionally, many of the early studies continued "to identify all of these aspects as objective traits or attributes that characterize individual identity" (Wurst, 1999:8). As a result, more recently, some historical archaeologists have begun to promote a relational view of these principles (e.g., McGuire and Reckner, 2002; Vermeer, 2006; Wurst, 1999), in which each individual principle "is not an entity that changes or reacts to history, but a set of relations that are historically constituted, fluid and constantly changing" (Wurst, 1999:9).

Kruczek-Aaron (2002), employing a relational view of gender, demonstrated that the highly decorated ceramics used in the Gerrit Smith household during the nineteenth century may represent a gendered struggle over self-presentation there. Smith, a politician involved in the abolitionist and temperance movements, believed that any type of display, whether a garden, wedding, or home

interior design, should be simple because "sacrifice in terms of consumption set the example of pious living" (Kruczek-Aaron, 2002:179). The household's transfer-printed pearlware vessels and dishes, however, bearing elaborate designs and "often aristocratic subject matter...may indicate that the Smith family women [Gerrit's wife, Ann, and his daughter, Elizabeth] were asserting themselves in the struggle over material culture" (Kruczek-Aaron, 2002:180). By examining the ceramics from a relational framework, instead of taking the household as a cohesive and single-minded unit, Kruczek-Aaron was able to elucidate potential gendered differences in the construction of identity.

Process and Presentation: Gender and Identity Construction

Some of the studies discussed herein draw upon the role of gender in the construction of identity. As just noted, Kruczek-Aaron's study of the Smith household suggests that the women of the family may have been attempting to construct a different identity to outside observers through their ceramic choices than Gerrit Smith was in agreement with. His wife, Ann, having come from a family that instilled her with "fashionable taste" (Kruczek-Aaron, 2002:179), may have desired to construct a more upper-class identity that involved showing others one's refinement and purchasing power, an identity more in line with her upbringing in one of Rochester's founding families. Wall's middle-class women of New York City, similarly, were trying to construct an identity in line with the middle-class values of piousness and domesticity, and the Redemptorist brothers were trying to construct a feminine identity that would reinforce their submissiveness, domesticity, and other values in line with their service to the church.

While these studies focused on extra-somatic means of identity construction, others have emphasized gendered identity construction through the body and personal adornment (see White and Beaudry, this volume). In a sense, such construction represents another scale at which gender organized society: the level of the individual. Thomas and Thomas (2004), for example, identify four layers of personal appearance—the body, against the body, clothing, and accessories—within which identity may be constructed. "These different layers of appearance can express different aspects of identity, and each layer may be more or less visible and comprehensible to different audiences. Furthermore, each of these layers functions somewhat differently in terms of the aspects of social identity that they communicate or reinforce" (Thomas and Thomas, 2004:107). Thomas and Thomas contend that three of these layers—the body, clothing, and accessories—are better suited to the construction of gender identity, the body, because gender assignments are often based on sexual differences (though for exceptions, cf. Whelan, 1991), and clothing and accessories because they can be worn in conformance or non-conformance with gender-based notions of appropriate dress and ornamentation. The effects of manipulating these layers in the construction of gender identity are shown through their study of African-American slaves at the Hermitage plantation in Tennessee during the first half of the nineteenth century (Thomas and Thomas, 2004). The work clothing provided to child slaves by their owners was uniform and of one piece, and thus served to mask gender differences. Even the gender-specific clothing worn by the adults was basic and shabby and therefore diminished individual identity, including gender identity (though certainly brought out class identity), which could have been emphasized through more individualistic clothing and accessories. Historical documentation of the former and archaeological evidence for the latter (such as buttons, pipe fragments, brooches, cane tips, parasol parts, and purse clips) indicate that these more individual expressions of self were used to personalize the self and reject the homogenized identity projected by their owners' choices (Thomas and Thomas, 2004). The manipulation of these layers supports the notion of gender as an active and fluid construction, with part of its fluidity due to the fact that it can be imposed by oneself or by others.

Synthesis and Conclusion

With the growing understanding by the majority of the field that "social scientific research must take gender and women into account if it is to be

academically credible" (Wylie, 1991:33), the historical archaeology of gender has found its footing in several quality studies. As would be expected, however, with any recently developed topic of study, it has been wrought with challenges. With regard to theory, the progress in overcoming these has been exponential in a brief amount of time. By quickly moving beyond finding men and women and predicting their material correlates to an understanding that gender structures society in several different ways at many different levels, historical archaeologists have been able to explore the means by which this process occurred historically, its interactions with other processes, such as class, ethnicity, and race, as well as the effects of and responses to these processes. What has become increasingly clear, however, is that the process of gender, its interactions, its effects, and responses to it are exceedingly complex and that our body of theory for such exploration, therefore, is probably still in its early stages. The field has only recently, for example, begun to conceive of gender as relational, to acknowledge its inextricability from other constructs, or to understand it can change or be changed as a facet of someone's identity. Recognition of these ideas, however, demonstrates that historical archaeology has made significant theoretical advances in the study of gender and suggests that with consistent attention to gender, it will continue to do so.

Methodologically, the field has struggled to keep pace but continues to evolve. Even in moving past the attempt to establish material correlates, which it largely has, the interpretation of discovered artifacts still frequently reflects assignments of separate spheres instead of addressing, for example, who bought them versus who used them (and did more than one individual use them) and how. How were they used explicitly versus implicitly and why? How does the archaeological record reflect the way gender structured the individual, the household, and the community? Clearly these questions are more difficult to assess archaeologically, especially where base documentary evidence is sparse.

As the studies described herein have shown, though, ways to address them are beginning to be developed. By comparing the structuring by gender at multiple levels of society, variation between the levels can be observed, providing a more accurate picture of what gender does and how what it does is affected by, say, private or public settings or power relations. By employing a relational view of the household, discontinuities in the quality and cost between purchased material classes may indicate a conflict over consumptive display. In another example, by looking at differences in personal artifacts, such as the owner-provided versus self-purchased clothing of slaves, the struggle to impose (between self and other) particular class and gender identities may be seen. As complex as gender is with regard to processes, interactions, effects, and responses, the methods for its study will likely need to be equally complex and thus should prove frustrating for some time. In the end, however, the benefits of attending to gender as a structuring principle of society will outweigh methodological frustrations as it will elucidate broader social processes and how these work to impact societies, perhaps in a way that might be useful for effecting social change.

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Interpretive Historical Archaeologies

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An Introduction by Way of an Example

In agreeing to do this chapter, I convinced myself that the task would be easier than it actually has been. I found that it was easier to recognize what made an interpretive historical archaeology than to explicitly define what made one so. As I sat at my computer, agonizing how to begin, I realized that perhaps I needed to begin with an example. It occurred to me that I regularly do a performance of interpretive historical archaeology every time I am introduced to a new person in a social setting that forces me to reveal my occupation as an archaeologist—a scenario that many of the readers will recognize. The performance begins with the inevitable question, the one question that every archaeologist is asked by new acquaintances.

"So, what's the most interesting thing you've ever found?" Most people want to hear about gold, jewelry, or exotic burial practices. Since most of the sites I work on are only 100–150 years old, and I avoid excavating human remains, I am already at a disadvantage compared to colleagues who work in exotic locales and distant times. But I always answer the same way (sometimes longer, sometimes shorter, depending on the audience and how full everyone's glasses are): "Well, probably one of the coolest things I've ever found is a toy porcelain soap dish." I usually pause, to give them the chance to think that I am a pretty poor archaeologist if that is the best I can do. Then I leap into my follow-up:

But let me explain why I think this is such a great artifact. I found the soap dish while excavating at Oakley Plantation, in Louisiana. The plantation was founded as a cotton venture in the late 1700s, and continued to be owned and managed by descendants of the same white planter family until the 1950s. The house is preserved as a state museum. I was interested in understanding the lives of African American families at the plantation. I excavated a house that had been occupied by families who worked in the planter's house as cooks and servants, first during the period of enslavement, and then after emancipation. All that was left of the house was some brick foundation piers and trash. I found the soap dish with other 1890s trash near one of the piers. It had probably been swept there as part of yard cleaning. By talking to people who had grown up on the plantation, looking at plantation documents, and census records, I learned that during this time the house was lived in by an African American woman named Silvia Freeman and her family. Freeman was a widow raising five children, while working as the cook for the Matthews family of Oakley.

The piece was lost unbroken. It was made of porcelain and had a band of gold paint decorating its edges. One edge was chipped, and a slightly different gold-colored paint had been used to repair it. I found, upon looking at materials in Oakley's house museum, that this soap dish was part of a toy porcelain set owned by the planter family. Scholars who have interviewed African American domestics from the southern United States have found that it was pretty common for planters to hand off items they no longer wanted (usually things that were damaged) to their black domestics, and archaeology showed this was a common occurrence at Oakley. The Matthews' records show that Silvia Freeman was paid $4.00 a month and usually had to borrow advances from her paychecks to support her family. If she was like most domestics, part of her resented having to accept hand-me-downs from her employers, but she probably also recognized that she needed some of them. This doesn't mean that she felt her children should settle for damaged, secondhand

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> toys. Also under her house I found a broken bottle embossed "Shing's Gold Paint." The residue inside the bottle matched the color of the repaired area on the soap dish. The repair job was done in the Freeman house. She probably also got the paint from the planter's house—the Matthews women were into the pastime of painting porcelain plates that was popular in the late nineteenth and early twentieth century.

So, let us just try to imagine this for a minute. Here is Silvia Freeman. She works 12 hour days for the planters. She gets back to her 12-by-15-foot house at the end of the day, the sun is down, and she only has gas lamps for light. She has fed the children, maybe has tucked some of them into bed. She sits there, squinting in the dim light, and carefully tries to repair this tiny little toy for her daughters. (At this part of the story, I usually cup my hand and mimic painting at an imaginary artifact cradled there.) She is tired, maybe the paint is a little old, starting to get clumpy. The repair is not perfect, but it looks better. What makes this artifact exciting, to me, is that once understood in its social historical context, we can see it to be a little material embodiment of someone's love for a child.

At this point, if my listener has not dozed off, or excused themselves (and this is a great way to drive off folks you do not really want to talk with), they usually say something to the affect of, "Huh, that is interesting, I didn't know you could figure out that kind of stuff from archaeology. It's kind of like the [American] television series *CSI*."

> But I'm still not done.
>
> But wait, there's a little more to the story. Remember how I told you we found the soap dish intact? It wasn't thrown out because it was broken; it ended up in the archaeological record because *someone lost it*. This little act of parental devotion was dropped or forgotten in the yard by an oblivious child, and swept unnoticed into the trash pile under the house, where we found it a hundred years later.

If my listener has had any experience with parenting or children, they now snort, laugh or smile knowingly. No matter what their color or their socioeconomic class, I have made a human connection for them with Silvia Freeman's life. It is a connection that transcends race, class, gender, and time—the listener and Silvia Freeman are joined by their common humanity through a little toy soap dish.

In essence, this is what interpretive historical archaeology is about—using a variety of lines of evidence to create a new historical narrative that has resonance with our experiences of contemporary society. It is about making the past accessible, relevant, and thought provoking. While I may haunt dinner parties and undergraduate anthropology association meetings with my interpretive ramblings, the most effective of us spread the "archaeological word" in venues as diverse as popular books, Web sites, public lectures, television and radio shows, and through newspaper interviews.

There is another point to briefly consider about this interpretation: I can use these same data to construct several alternate interpretations that would be equally supported by the evidence. I like this version most because it best tells that story and creates the impact that I want to communicate about this particular site. I have consciously selected one form of emplotment (White, 1975) over another. Such an admission would have been impossible for me to make in my younger days, when like Fox Mulder (the fictional U.S. Federal Bureau of Investigation agent played by David Duchovny on the 1993–2002 American television series *The X-Files* who believes in unidentified flying objects and a government conspiracy to hide or deny the truth of their existence), I thought that there was one archaeological "TRUTH" out there. The ability to embrace, or at least acknowledge, ambiguity is a hallmark of interpretive historical archaeology. Please note that this acceptance does not make the results of interpretive historical archaeology less real than other archaeological results, just more realistic. With that in mind, let me now explain in more detail what I have come to see as interpretive historical archaeology.

Defining Interpretive Historical Archaeology

I would suggest that interpretive historical archaeology represents the theoretical and methodological outcome of the debates and controversies that have shaped the discipline over the last 30, but particularly, the last 10 years. What then are the characteristics of an "interpretive historical archaeology"? There

was no recognized movement to create a school of interpretive historical archaeology; instead, there were, and are, a number of practitioners from a range of theoretical perspectives who share a commitment to constructing archaeological interpretations that are empirically rigorous, historically situated, and socially relevant.

Feminism, Marxism, post-structuralism, critical race theory, postcolonial studies, and social identity theorizing from sociology and psychology are only a few of the intellectual influences shaping scholars producing interpretive historical archaeo logies. Despite the range of theoretical influences, interpretive historical archaeologies share an emphasis on interdisciplinary approaches and a commitment to integrating a broad range of nonarchaeological lines of evidence. The past is not conveniently partitioned into disciplinary compartments—interpretive historical archaeologies likewise work to subvert traditional disciplinary boundaries—not content to produce flat and one-dimensional archaeological nar-ratives.

The historical situatedness of an interpretive historical archaeology is twofold—the archaeologist acknowledges both the social historical contexts in which the materials and people they study lived and the historical contexts in which he or she is crafting archaeological interpretations. In such a way, the archaeologist acknowledges the role that he or she plays in shaping the interpretations of the data.

Interpretive historical archaeologies are strongly empirical works. To successfully contextualize archaeological materials requires a strong understanding of the artifactual data and a mastery of a broad swath of social history. By its nature, then, interpretive historical archaeology is interdisciplinary—dependent upon the methods and theories of anthropology and other social sciences, and the established historiographies of scholars who work on similar issues through documents, oral history, architecture, and material culture. While historical archaeologists 30 years ago might have debated whether their practice was best aligned with history or anthropology (see Schuyler [1978] for a sampling of this early literature), interpretive historical archaeologists would question whether such disciplinary boundaries are in fact meaningful.

Interpretive historical archaeology does not represent a subdiscipline of historical archaeology so much as it defines the current cutting intellectual and theoretical state of the discipline. Understanding how interpretive historical archaeology has come to be requires a brief consideration of the theoretical debates that have come before.

Historical Perspective

As the discipline of historical archaeology was still developing, one of the raging intellectual debates that mobilized practitioners was the question of whether the field was inherently historical or inherently anthropological (e.g., Fontana, 1965; Harrington, 1955; Schuyler, 1970). These debates were not merely a question of naming, but had profound implications for how the discipline would move forward both methodologically and theoretically. In many cases, the factions were making similar kinds of arguments. For instance, both groups of scholars backed the notion that archaeology could fill the gaps of the historical record, so to speak, filling in those missing pages that documents could not.

For the historically inclined in the debate, this meant that archaeology offered an alternative type of chronicle of the past—with chronicle being history written with a focus on the ordering of events. Ivor Noël Hume's work on the Martin's Hundred massacre of the early 1600s (Noël Hume, 1982) is an excellent example of the kinds of compelling narratives that could be created through this approach. More recently, a number of battlefield archaeological projects, including such well-known sites as Wounded Knee (Scott et al., 1989) and the Cheyenne Massacre (McDonald et al., 1991), have had similar kinds of forensic historical archaeology conducted in order to suggest alternative narratives and clarify battlefield accounts. Similarly, the Ludlow Collective's work at the Ludlow Massacre site seeks to challenge managements' accounts of how labor organized and resisted against strikebreakers (The Ludlow Collective, 2001; also see Saitta, 2007). A similar kind of project is planned to draw attention to the Colfax Massacre site in Louisiana, where hundreds, and perhaps thousands, of African Americans

were slain as part of white supremacist actions surrounding the 1876 presidential election. Not only has this kind of work led scholars and the public to rethink histories that were thought to be well known and documented, but these projects have also created important opportunities for collaboration with indigenous peoples and descendant groups.

While the scholars associated with these projects may be themselves anthropologists, these projects are, however, historical projects, in that they are concerned ultimately with understanding pivotal events through an archaeological gaze, and the "event" is the purview of the historian.

Anthropologically inclined archaeologists saw the potentials of the archaeological record in another light. Social groups, disenfranchised by the creators of the archival record, had equal footing in the archaeological record as those who oppressed them. As such, archaeology was the most democratic of evidence about the past. This intellectual focus on the democratic nature of archaeological data was perhaps bolstered by the coinciding of the discipline's growth with the preparations for the United States' Bicentennial celebrations. After all, how better to learn about the history of the democratic republic better than through the lens of a democratic evidentiary base. While the historically based route focused on archaeology as a means of illuminating under- or undocumented events, the anthropological research, developed within the context of American anthropological archaeology, was primarily concerned with issues of process—how do cultures respond in circumstances of contact; what is the nature of culture change; how do ethnic groups form; how do colonial exchange networks develop? These were the kinds of questions that anthropologically oriented work focused on addressing (e.g., Deagan, 1983; Deetz, 1977; Schuyler, 1980).

Perhaps it should be apparent that really at play were issues of scale as much as discipline—How does one define "events" within archaeological deposits created by a number of generations over broader expanses of time? How does one study culture change from a short-term occupation? Certain kinds of occupations, by the nature of their creation, use, and abandonment, were better suited for answering certain research questions, while other sites were better suited to addressing other kinds of questions. What made historical archaeological sites different from those being studied by prehistorians was that the addition of documentary evidence made it possible to identify sites associated with particular historical events. Interpretive historical archaeology represents a recognition that archaeological sites provide insights into different scales of being to different degrees of resolution and that there is the potential within the cumulative archaeological record to explore all social, geographical, and temporal scales of the recent past. Yet this is not the only way that interpretive historical archaeology resolves the supposed history–anthropology divide.

Much early historical archaeological work also suffered from an innocent view of the nature of archaeological and documentary data, perceiving them to be independent sources of information that could be easily compared and contrasted, that contained complementary data, despite the efforts of some archaeologists to urge rigorous and sophisticated use of documents (e.g., Beaudry, 1988). The written word is privileged as authoritative and somehow more "true" than other ways of knowing, and many historical archaeologists have fallen prey to the notion that the documents on a particular site should lead the way. It certainly did not help that our prehistorian colleagues pooh-poohed documents as unnecessary crutches to interpretation. Attempts to make historical archaeology more scientific (e.g., South, 1977) only demonstrated that documents provided the kinds of textured nuance and complexity that would undermine attempts to create generalizable, law-like statements about past cultures. Meanwhile, Mark Leone (1981, 1982) was focusing his efforts on understanding more about the nature of the relationship between documents and artifacts and how the politics of the present shaped the presentation of the past.

The discovery of the African Burial Ground in New York City, and the range of issues it raised about archaeological ethics, authority, and overall purpose, served as an event that ultimately challenged historical archaeologists to reconsider what they were doing and for whom. Historical archaeology was not alone in this respect, as American anthropological archaeologists were simultaneously faced with meeting the requirements of the Native American Graves and Repatriation Act (NAGPRA) of 1990.

In the early 1990s, American archaeology needed a paradigm shift. A growing number of voices, both American and British, were willing to provide alternative ways of approaching the past, and the shift in circumstances found the audience for their work growing. Feminists (Gero and Conkey, 1991; Seifert, 1991) and Marxists (Leone et al., 1987) have suggested ways that archaeologists could decenter their gender, class, and racialized positions in productive ways. More importantly, many prehistorians were calling for archaeologists to recognize that the unique historical pasts that were shared by groups of people ultimately shaped the ways that they acted and saw the world—people were historically embedded in their lifeways, and an understanding of history mattered (Hodder, 1991).

Until the 1990s, historical archaeology had also been a rather parochial field of study, most commonly associated with Americanist practice. American archaeologists were happy to go to other countries and practice their craft abroad, but rarely did the ideas of local scholars shape their research questions or practices. While we may quibble about whether the title "historical archaeology" is really an appropriate one, it is now possible to find local archaeologists working on (and publishing about) sites dating to the not-so-deep past on just about every continent (e.g., Buchli and Lucas, 2001). In particular, the intellectual discourse of the discipline is no longer dominated by Americans, but is increasingly more international—albeit its geography still largely conforms to the boundaries of the British Empire and Commonwealth. Interpretive historical archaeology represents the theoretical and methodological attempts to address the range of intellectual and political issues that were raised in historical archaeology in the early 1990s.

Defining Interpretive Archaeology

First, it is necessary to explain how "interpretive historical archaeology" differs from "interpretive archaeology" as defined by Hodder. Ian Hodder (1991) proposed the term "interpretive archaeology" as a clarification and elaboration of his intellectual vision for the goals of a contextual or postprocessual archaeology. Hodder (1991:5) outlined three goals of an interpretive archaeology. First, interpretive archaeology was to be rooted in a guarded objectivity (data formed within a dialectical relation) that allowed subaltern groups to use the archaeological record in empowering ways. Second, interpretive archaeology should retain an internal hermeneutic interpretive component. Third, interpretive archaeology would include a reflexive consideration of the production of archaeological knowledge that would lead to critically engaged, multivocal dialogues.

In delineating an "interpretive archaeology," Hodder was describing an approach to the past, as I have already discussed, that had already been developing in, and is now well established in, American historical archaeologies (Ascher and Fairbanks, 1971; Beaudry, 1988; Deetz, 1977; Leone et al., 1987), and increasingly in archaeologies of the recent past globally (e.g., Byrne, 2003; Lucas, 2004; Tarlow and West, 1999). Many historical archaeologists consider their work to be interpretive and describe it as such (e.g., Beaudry, 1996; Praetzellis and Praetzellis, 2001; Yamin, 2002; Yentsch, 1994), but other historical archaeologists doing what I would consider interpretive historical archaeologies may not initially think of themselves in this way (e.g., Gilchrist, 2000; Johnson, 2005; Mullins, 1999). The term provides a useful descriptor for a theoretically diverse set of archaeologies that nonetheless share certain intellectual approaches and goals. Therefore, it is useful to co-opt and slightly redefine Hodder's term.

Interpretive historical archaeologies, while to a degree influenced by Hodder's contextual work (particularly in England, where interest in the late historical period is more recent), developed as a result of two primary factors: first, the discipline has long been concerned with using textual evidence in productive interpretive ways; and second, research has focused on the microscalar levels of society—households and small communities—to understand the diversity of social experiences comprising the past.

While many interpretive historical archaeologies are microscalar in scope, looking at how individuals and groups of individuals use material culture as they navigate through their respective sociocultural and historical contexts (Mullins, 1999; Praetzellis and Praetzellis, 2001; Wood, 2004), these approaches

can be used to consider broader geographic and chronological spans (e.g., Beaudry, 2006; Claney, 2004; De Cunzo, 2004; Ferguson, 1992; Leone, 2005; Lightfoot, 2005). Even those studies based on the household level attempt to draw on understandings of broad social, political, and economic movements to situate their archaeological findings (e.g., Mullins, 1999; Praetzellis and Praetzellis, 2001; Wilkie, 2003). Therefore, interpretive historical archaeologies should be seen as intrinsically multiscalar. In all cases, however, interpretive historical archaeologies seek to illuminate the textures and nuances in society rather than seeking to create blanket characterizations of the past.

Interpretive historical archaeologies seek to challenge perceptions of hegemony, not replicate it. Through its emphasis on the small and the local, interpretive historical archaeologies seek to explore the lived experiences of socioeconomically, racially, ethnically, and sexually diverse persons and communities. In such a way it is possible to provide narratives that counter interpretations that reify hegemonic ideologies.

I suggest that the four elements that define an interpretive historical archaeology are as follows:

1. Practitioners of interpretive historical archaeologies recognize that the actors represented in the archaeological record were shaped by, and in turn, shaped, the broader social historical contexts in which they lived. To put this more bluntly, history matters. Interpretive historical archaeologies are contextual archaeologies.
2. In interpretive historical archaeologies, documents (including literary and artistic sources), oral histories, architecture, material culture, and archaeological remains are all significant elements of the universe of evidence used to inform us about past social lives. Each of these bodies of evidence is affected by distinct and unique life histories and curation and preservation processes. Used together, these evidentiary lines offer the greatest potential for creating holistic historical narratives and interpretations. By their nature, interpretive historical archaeologies are empirically rigorous—that is, they are data driven.
3. Archaeological interpretations made by practitioners of interpretive historical archaeologies are situated in the present and shaped by the subject positions of the archaeologist in discourse with contemporary descendant communities.
4. Practitioners of interpretive historical archaeologies are committed to making archaeological information accessible—through a range of publication media and modes.

These points deserve some further examination and discussion. There may be archaeologists whose work embodies one or more of these characteristics, but I would argue that truly interpretive historical archaeologies involve all four elements.

History Matters

Practitioners of interpretive historical archaeology, because of their use of documentary sources and primary focus on small communities, acknowledge the role of the actor as having some ability to consciously participate in social discourses and to manipulate material culture to suit their unique and particular needs. Actors are products of particular time periods and specific historical contexts, but within these contexts they act as knowledgeable agents. As a result, interpretive historical archaeologists seek to understand the rough rather than smooth edges of history—looking at discord, disharmony, and difference as much as considering harmony and cooperation. Interpretive historical archaeologies consider untidiness in the past.

This intellectual commitment is particularly well illustrated in Praetzellis and Praetzellis's (2001:645) comparative consideration of how households of different social and economic standing in nineteenth-century California differentially used the material language of Victorian "gentility" to pursue their own political, social, and ethnic agendas at different times and in particular places. The Praetzellises compare materials that were known to have served as important "information goods" in Victorian society—ceramics, from African American, Chinese, Californio, and brothel households in nineteenth-century California. They argue that these materials possessed powerful and conventional meanings that were understood throughout California during this period, and that in a racially,

economically, and politically diverse social setting, persons used other's knowledge of these meanings as cultural capital. Their discussion of the goods of Don Mariana Guadalupe Vallejo and Yee Ah Tye deserves further consideration as particularly elegant examples of interpretive historical archaeologies.

Vallejo had been one of the largest landholders in Mexican California—a status he was quickly stripped of (as he was stripped of his landholdings) when the Americans took control of California. Even so, Vallejo actively worked to integrate within the new society and manipulated material culture to signal his openness to American rule. Praetzellis and Praetzellis (2001) observed that Vallejo lived in an adobe structure that bore the external appearance of a New England home, which is a strange combination in an area that had a deep and rich vernacular architectural heritage. While his former countrymen provisioned their tables with majolica soup plates, Vallejo opted exclusively for ceramics manufactured by the British potter, Spode, in a range of patterns that were familiar to and popular with the American elite that he invited as guests to his home. The Praetzellises note that this decision was a means for Vallejo to wear his political views on his table, so to speak.

Even more intriguing is the authors' interpretation of materials from the home of Yee Ah Tye, a Chinese man who came to represent the Sze Yup Association of Chinese business men in San Francisco and Sacramento. Excavations of the burned workers' housing of the Sze Yup Association in Sacramento provided insights into how men like Yee Ah Tye may have been involved in what was known as "impression management." Documentary evidence about Yee Ah Tye's life indicates that he seems to have adopted a number of American ways—in his child-rearing methods and home life, in his business dealings, and in his language use.

The Chinese were viewed with great suspicion in early American California. Their perceived cultural exoticness was especially seen as a barrier to their success in making business transactions with members of the white California elite. As a representative of the Chinese business association, Yee Ah Tye would have been the public face of all those merchants of the association. Such men entertained the leaders of the white community in their homes, and a historical account of such a meal at Yee Ah Tye's documented that guests were surprised (and disappointed) to find themselves at this event served European-style dishes on American-style ceramics. Yee Ah Tye recognized through the manipulation of gentility he could demonstrate his non-foreignness. Excavations of the Young Wo agent's quarters in Sacramento recovered an assemblage that was mainly composed of European and American ceramics, with few Chinese porcelains, suggesting that agents may have regularly employed this tactic of strategic gentility. Intriguingly, the Praetzellises observe that excavations of a Chinese mining camp supplied by Yee Ah Tye recovered almost exclusively Chinese porcelains. While actively using Victorian gentility to his advantage, they suggest that the merchant may have also been actively cutting off the social mobility of these Chinese workers.

This work recognizes the cultural and social structures that shaped people's experiences, but does not deny their ability to manipulate or play upon these structures to their own advantages. In particular, the case studies illustrate that within ethnic groups that are often presented in narratives as monolithic and homogenous, there are competing strategies and agendas at play that are observable through material culture.

Evidentiary Lines

James Deetz, one of the founders of historical archaeology, once said that historical archaeology is an expensive way of learning something we already know (Deetz, 1996:32). Deetz made his statement as a joking challenge to his colleagues to go further with their interpretations. What then, does archaeology offer to us that we do not already know from other sources?

Some people have conceptualized texts as providing an essentially true, but incomplete, chronological narrative of the past. Archaeological information, for these researchers, can sometimes be used to fill in gaps in the text-driven narrative. Still others see the archaeological and textual records as providing complementary stories of the past. In their approach, historical archaeology should focus its studies on instances when textual and archaeological

narratives contradict one another. In other words, when the archaeology says one thing and texts another, that is when it is interesting to look at.

Of late, archaeologists have become anxious over the juxtaposition of texts and artifacts as separate bodies of evidence. Two authors who have explicitly addressed this issue are Martin Hall (2000) and John Moreland (2001). Hall (2000:16) observes that the separation of material culture from documents is an artificial one created by modern disciplinary boundaries, not intrinsic differences between the kinds of data: "Both artifacts and literary texts make use of images; those who read their meaning did not respect the disciplinary boundaries of the practitioners who would one day seek to understand their minds." Hall (2000:16) employs the concept of "transcripts" in his interpretive work that recognizes that documents and artifacts are the products of the same cultural context.

Moreland (2001:110–111) has critiqued historical archaeologies as falling into two camps: those who are too quick to embrace the authority of documents and those who are too quick to dismiss their reliability. In both cases, he argues, archaeologists miss the role of writing as a tool of oppression and power. Moreland (2001:119) proposes that archaeologists need to see "the Object, the Voice and the Word" as a tool that past societies used to create systems of power.

Practitioners of an interpretive historical archaeology see the documentary and archaeological record as inherently intertwined and inseparable in archaeological interpretations and narratives. Mary Beaudry speaks for many interpretive historical archaeologists as she eloquently describes how these lines of evidence are used together to create archaeological narratives in her recent work:

> My approach is broadly interpretive, and my aim is to move past the ostensibly simple first steps of artifact identification and dating and even beyond "engendering" artifacts by bringing multiple lines of evidence to bear on the interpretation of the material culture of sewing and needlework in the "active voice." An interpretive approach acknowledges that material culture is not just something people create but an integral component of our personalities and our social lives, deeply implicated in how we construct social relationships (Beaudry, 2006:7).

While many historical archaeologists deal with the simple binary of documents versus artifacts, in actuality, the realm of potential sources of knowing about the past is much broader. Standing architecture, nonarchaeological material culture (as curated in museum and archival collections), and any range of oral traditions, from songs, riddles and jokes, tall-tales to formally and informally collected oral histories, are important windows into past lives. A term that best describes interpretive historical archaeology is one that was once used to describe the four-field approach to anthropology: holistic. Interpretive historical archaeologies demand a holistic consideration of traces of the past.

A realm of documents that are only just now drawing archaeological attention are literary works of fiction. There has been remarkably little consideration of contemporary literary and performing arts in our discussions of social context, with the notable exception of Alasdair Brooks's (1999) and Gavin Lucas's (2003) studies of literary themes portrayed on transfer-printed ceramics, and a limited body of work within African American archaeology (Mullins, 1999; Wilkie, 2000, 2003). In defining literary works, I am referring here to novels, poems, plays, and operas, etc. Archaeologists have been very good at using textual genres such as autobiographies, travel accounts, and proscriptive literature, but for the most part, we have not ventured into literary texts. I suspect there are several reasons for this, foremost being the baggage of our discipline's "scientific" heritage. We tend to emphasize the use of documents that we see as more reliable, factual, or truthful.

Recently, Bridget Heneghan (2003) has provided a brilliant analysis of how teawares and ceramics are used in Harriet Jacob's ex-slave narrative, *Incidents in the Life of a Slave Girl*, to demonstrate to white readers the gentility and propriety of Jacobs. Heneghan convincingly argues that Jacobs was aware of the symbolic role of ceramics in communicating domesticity and motherhood to white audiences and actively manipulated those meanings to generate greater sympathy for her plight.

If we are to accept Hall and Moreland's points that the artifacts we excavate are products of the same "lifeworlds" as the texts we interrogate, then it logically follows that all and any texts created by a society could be considered by archaeologists as potentially relevant to their work. There are, of course, difficulties with using period texts. Great

works of literature are like any of the other artifacts we study, and they can be imbued with new meanings by new generations. This is the basis of literary criticism. If we are to use literary texts, we must beware of decontextualizing our understandings of them from the lifeworlds that their authors and consumers inhabited (see Wood, 1990). Such is always a danger when reading any text. I would suggest that an archaeological approach to period literature must treat it as a product of a particular social historical context and consider ways it is reused and reinvented by multiple consumers in different times and places.

Interpretive historical archaeologists face the heavy intellectual burden of needing to be responsible to the primary and secondary historical literature and its historiography, as well as the vast literature of archaeology. The results of interpretive historical archaeology practice are something not easily categorized as history or anthropology, but perhaps are best seen as true historical anthropology, where scholars like John and Jean Comaroff (Comaroff and Comaroff, 1992) advocate for the use of material traces to create historical ethnographic narratives, though scholars who follow their advice most often rely upon material cultural remains, not archaeological ones (e.g., Ferme, 2001; Thomas, 1991). An interpretive historical archaeological narrative is one that integrates evidence in such a way that the cohesion of the interpretation cannot withstand the removal of any particular strand of evidence.

Because of the large range of sources that need to be considered in an interpretive historical archaeology, these works, although typically humanistic in their focus, are empirically rich and data driven. Mary Beaudry's recent book, *Findings: The Material Culture of Needlework and Sewing* (2006), is an excellent example of a richly detailed and evidence-rich interpretive historical archaeology. To understand the meanings and communicative power of needlework and sewing to the women engaged in it from the Middle Ages to the Industrial Revolution, Beaudry takes a broadly comparative approach to archaeological data, drawing upon evidence from Great Britain, North America, and Australia. The life histories of the artifacts—from production to deposition—are detailed through careful historical research into a range of records including personal papers and period publications. Curated material culture from the Winterthur Museum, and several museums and collections in England, was drawn upon to study complete examples of archaeological finds; to study objects related to needlework and sewing that do not preserve in the archaeological record; and to study the finished products of women's labor in these arenas that still exist. Through an interplay of these archaeological, documentary, and material culture sources, Beaudry not only successfully illuminates the social and economic importance of needlework and sewing but also convincingly demonstrates how archaeologists have neglected a vast category of artifactual materials.

Situated Interpretations

Interpretive historical archaeologies are self-reflexive and politically engaged. Practitioners seek to render visible the process of knowledge production and interpretation, and through interpretation, provide insights into structural inequalities that shape our contemporary experiences. This commitment to using archaeology as a tool for political enlightenment is not new in the discipline but has roots in the early works of Mark Leone (1981, 1982) and has blossomed following the discovery of the African Burial Ground, which spurred greater discussion in the discipline regarding the responsibilities of archaeologists to descendent communities (e.g., McDavid and Babson, 1997).

Maria Franklin (2001), in her study of African American foodways at Rich Neck Plantation, Virginia, demonstrates how remains as seemingly innocuous as animal bones are racially and politically charged artifacts. She very effectively begins her paper by recounting an event that caused controversy on the PGA Tour (organization that operates the main professional golf tours in the United States). Fuzzy Zoeller made a clearly racist remark on the occasion of championship golfer Tiger Wood's first Master's win, which entitled him to pick the menu at the banquet the following year. To the CNN broadcasting network, Franklin reminds us, Zoeller stated, "That little boy is driving well and he's putting well. He's doing everything it

takes to win. So, you know what you guys do when he gets in here? You pat him on the back and say, 'congratulations' and 'enjoy it' and tell him not to serve fried chicken next year. Got it? Or collard greens or whatever the hell they serve" (Franklin, 2001:88).

In this brief anecdote, Franklin reminds the reader how food becomes a powerful means to communicate racism and inequality. Thus demonstrating that food stereotypes related to African Americans remain entrenched in contemporary American society, Franklin uses the faunal remains associated with enslaved peoples' households at Rich Neck to look at how foodways were a way of constructing a sense of African American community among enslaved people. These same foods were also used by Euroamericans, who often consumed meals prepared for them by enslaved people, to draw boundaries between what it was to be white versus black. Franklin explores how this contradiction continues in contemporary society, where certain African American foods are used to perpetuate stereotypes at the same time they are appropriated by southern whites as part of regional pride.

While Franklin's article is an example of politically engaged work directed toward educating fellow archaeologists, she and others are among a growing number of scholars who have organized archaeological projects that have been explicitly designed to increase public awareness of race and power structures in contemporary society.

Accessibility

A final distinguishing feature of interpretive historical archaeology is its practitioner's commitment to making their works accessible to a wide range of scholarly and vocational publics. This public engagement can take many forms, be it the creation of large synthetic databases that make data widely accessible and available, such as that of the Digital Archaeological Archive of Comparative Slavery (www.daacs.org), the creation of Web sites geared toward the public, projects that involve community collaboration, the creation of videos, or books published for nonspecialist audiences (e.g., Cantwell and Wall, 2001; De Cunzo and Jameson, 2005). The Society for Historical Archaeology has endorsed this goal through the creation of the James Deetz Award, which honors the extremely accessible yet scholarly work of James Deetz (e.g., 1977; Deetz and Deetz, 2000) by acknowledging authors whose works strive to reach a broad reading public.

In particular, a distinctive form of narrative presentation has developed in historical archaeology, which draws upon the use of literary flourishes (e.g., Costello, 2000; Ferguson, 1992; Praetzellis and Praetzellis, 1998; Wilkie, 2003). Interpretive historical archaeology has the strongest tradition of pushing the creative envelope in its writing. Not all realms of archaeological investigation require or deserve book-length attention, but interpretive historical archaeology is a field whose evidence is so rich and complex that much of its scholarship demands book-length treatment. Yet the practices of the discipline are such that creativity in the book format is often stifled by an adherence to the deep-seated structures of the site report and dissertation.

Unfortunately, some of the more avant-garde writers have felt the need to apologize for some of their creativity, such as some authors responsible for the outstanding work that has been done in the genre of "storytelling" in historical archaeology. This mode of writing incorporates narrative fiction into archaeological interpretations. This work has been characterized by some—even those who write it—as playful practice rather than serious scholarship (e.g., Praetzellis and Praetzellis, 1998). I would argue that instead of merely playful practice, these works have made theoretically sound observations of data and archaeological practice in profound ways (also see Majewski, 2003).

Not everyone agrees with me. Charles Orser writes, "Interpretive archaeology is much like postmodern literature that constantly and sometimes confusingly glides between past and present and from scene to scene. Archaeology conceived as storytelling has the potential to increase public awareness of archaeology, but it also contains hidden dangers. Is it possible that archaeological tale-spinning could have a negative impact on the discipline by showing non-archaeologists that exacting archaeological research is largely boring?" (Orser, 2001:9). He goes on to claim that most people would prefer to read *Gone with the Wind* rather than

an archaeological site report. My question is, why do we assume that rigorous empirical work can only be properly presented in a site report format?

In his 1975 book, *Metahistory*, Hayden White made the argument that historians, no matter how scrupulous in their evidentiary practices, rely upon modes of thought that are not empirical. They adopt distinctive forms of argument and employ different types of emplotment in creating historical narratives. He argues that most histories fall into one of four tropes, "Romance," "Tragedy," "Comedy," and "Satire," and went on to categorize the history of historical writing according to the popularity of certain tropes. For our purposes, White's work, while still contested by some historians, is useful to consider because he argues for a self-critical and reflective approach to the writing of history. While Hayden's work has implications for reading history, it also has implications for the way we write history. I would suggest that we consciously reflect upon the kinds of emplotment that may be unconsciously shaping our works, but also, that we consciously use this to our advantage when writing . . . that archaeologists embrace that they are at all times storytellers. In a recent review of historical archaeological writing, Rosemary Joyce (2006:48) has found that

> Writing by historical archaeologists shows far more explicit engagement with problems of narrative and representation than most such work in other traditions of archaeology. Part of the reason for this difference may be a greater sense of the real historically situated persons whose lives and actions writers attempt to represent, created by the ability of historical archaeologists to engage with their subjects through documents as well as other forms of material culture. Another source of that sensibility undoubtedly is the routine engagement of historical archaeologists with living human beings who are often descendants of those whose life histories archaeology intersects.

Joyce goes on to hypothesize that historical archaeology's attention to the contradictions between words and things forces historical archaeologists to "live with the knowledge that there is no single story that can adequately account for the phenomena they study. This predisposes them to prefer accounts that deal meaningfully with all the richness of the material at hand, rather than explanation which reduce that richness to a few main points that may have broader explanatory power" (Joyce, 2006:49). While Joyce's discussion focuses upon historical archaeological writing at large, it is worth noting that all of the authors she discusses are recognizable as interpretive historical archaeologists.

Conclusions

In closing, interpretive historical archaeologies are those studies that attempt to create historically situated narratives about the past using archaeological, documentary, material cultural, and oral historical lines of evidence. Interpretive historical archaeologists recognize the tremendous potential of archaeological knowledge to contribute to modern social dialogues and to shed light on modern social circumstances. Interpretive historical archaeologists are committed to making their work accessible to many audiences, in the academy and beyond, through a variety of media. This form of archaeological approach and reasoning, while certainly influenced by the postprocessual movement, has its own unique history within the debates and concerns of historical archaeological practice.

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Asian American Studies in Historical Archaeology

Edward Staski

Introduction

In this chapter, consideration is given to the history and current state of the historical archaeology of Asian Americans. The chapter begins with a discussion of how Asian American historical archaeology got started in the 1970s. This discussion is followed by a review of how this field has developed through the decades, up to the present day. Developmental trends in Asian American historical archaeology are identified. These include the emergence of increasingly sophisticated methods that have allowed for more useful comparative studies; a growing interest in theoretical matters, making it possible for historical archaeologists to not only describe but also explain Asian American experiences; and the growing primacy of assimilation studies among historical archaeologists studying Asian Americans, only to be very recently challenged by a growing postprocessual interest in individual agency, resistance to accommodation, and other postmodern concerns.

A number of future directions and developments are then recommended. First, there is the need to expand our geographic and temporal horizons by implementing diverse research strategies both in places where Asian Americans originated and in places where they settled. Second, advances in methods are required to better identify and interpret the Asian American archaeological record. Finally, it is always imperative to evaluate critically and advance competing theoretical perspectives so that the best possible explanations can be made.

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Historical archaeology is defined here in its broadest sense to include all contexts for which there are both material remains and documents available for study. All Asian American experiences fall within the purview of historical archaeology. Most Asians could write about their experiences in America, and most of the people they found in America could write about them. Thus, there are available material remains and documents from "both sides" of the contact that occurred. Few of the participants originated from prehistoric or protohistoric societies. Those that did were members of various Native American societies, and contact between them and Asian Americans appears to have been limited. Studying Asian Americans is not an exercise in prehistory or even ethnohistory. It is, by its nature, a most suitable topic of investigation by historical archaeologists.

The Beginnings of Asian American Historical Archaeology

The emergence and early growth of Asian American historical archaeology mirrors the emergence and early growth of archaeological studies of ethnicity in general (Staski, 1990). These were originally inspired by the larger political and social climate of the 1960s, which resulted in civil-rights legislation, calls for affirmative action and other mitigating measures, related social unrest across the country, and a universal expansion of scholarly interest in ethnicity. Almost all of the earliest studies of ethnicity in historical archaeology came about as part of the dramatic expansion of the discipline itself, however, which occurred in the 1970s and

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1980s because of the legal mandates of cultural resource management (CRM) (cf. Ayres, 1994:483). Before the 1970s, there was little archaeological interest in ethnic group experiences in the United States, and it is doubtful that much interest would have developed without the legal requirements that relatively recent historical times and experiences be explored.

Early Asian American historical archaeology, like much CRM work, emphasized certain methodological concerns (e.g., recognizing Asian American material remains) and description (which was often limited to the material reflections of diet and drug use). The distinctive nature of Asian American assemblages was noted, though there was minimal theoretical concern about why these assemblages were so distinct. Little theory of any kind was developed, and research efforts were not coordinated. As a result, various descriptive schemes (e.g., artifact classifications) were produced that could not be compared easily with one another. Efforts were limited to a rather narrow range of contexts and site types, including urban Chinatowns, mining camps, railroad camps, and some fishing or agricultural areas. Almost no attention was given to Asian Americans other than the Chinese.

A few pioneering works, however, suggested that Asian American historical archaeology had greater scholarly potential. In the 1970s, Roberta Greenwood published a number of innovative studies that later researchers would emulate (Greenwood, 1975, 1976). Then, in 1980, Robert Schuyler compiled and edited a collection of diverse articles on Asian American (and African American) historical archaeology, the first of its kind to be published (Schuyler, 1980). Two years later, Randall McGuire offered a theory-focused synthesis of then-current investigations of ethnicity in general (McGuire, 1982). These studies of ethnicity in historical archaeology, including studies of Asian Americans, started to mature.

Recent Concerns

Asian American historical archaeology has become more sophisticated in recent years, as have all archaeological studies of ethnicity. Methodological concerns and descriptive studies have continued, of course, though these have become more standardized and thus more comparable (e.g., Chung and Wegars, 2005; Cohen, 2000; Layton, 2002; Wegars, 2003a, 2003b; see especially Wegars (1994) for a discussion of her pioneering efforts in this arena). Communication among historical archaeologists studying Asian Americans has increased and become more productive. (Certain other limitations, however, have continued; see the recommendations section below.) There has also been a growing interest in theoretical matters, as scholarship on Asian history and anthropology has been increasingly incorporated into the research designs and interpretive studies of archaeology (e.g., Cassel, 2002).

Most recently, a number of historical archaeologists have applied postprocessual perspectives in their attempts to interpret and explain ethnic identity and experiences (e.g., Jones, 1997, 1999; Lydon, 1999). Inspired by other postprocessual archaeologists (e.g., Hodder, 1986; Preucel, 1991, 1995; Shanks and Tilley, 1987) and certain other scholars who study Asian Americans (e.g., social constructivists such as Min [2002]), these historical archaeologists focus on individual agency, dissention and resistance to change or accommodation in the face of culture contact, and the related methodological challenge of observing and measuring such phenomena in the archaeological record. Their critique of classic assimilation studies in archaeology and in scholarship generally (e.g., Alba and Nee, 2003) raises the question of how best archaeologists might study ethnicity and ethnic identity.

Assimilation

Despite these inroads by the postprocessualist thinkers, the nature of assimilation among Asian Americans remains the primary theoretical and methodological issue in Asian American studies in historical archaeology. For a sampling of recent, germane assimilation studies in the social sciences, see Alba and Nee (2003), Krysan and Lewis (2004), Lee and Zhou (2004); Min (2002), and Rumbaut and Portes (2001). Ways of recognizing, recording, measuring, and interpreting degrees of assimilation, in both the archaeological and documentary

records, have become the major concerns. This development reflects the continuing assumption that Asian Americans maintained much more ethnic separation than most other groups who immigrated to the western hemisphere.

Historical archaeologists have found it difficult to explain this apparent high degree of ethnic separation. Attempts to define such basic concepts as *ethnic group* and *assimilation* have turned out to be problematic. To be useful, the definitions must be consistent with the views of anthropologists, historians, and other social scientists who have studied ethnic phenomena. They must also be designed with a clear understanding of the inherent strengths and weaknesses of historical archaeology (e.g., the ability to observe and measure only a limited number of sociocultural experiences in the archaeological record).

This task has not been straightforward. Over the past several decades, various definitions for ethnic group and assimilation have been proposed. Available ethnic group definitions, for example, stress such diverse factors as (1) patterns of ecologic–economic interdependencies (Abruzzi, 1982; Barth, 1969:7–38); (2) psychological identification and a shared sense of "peoplehood" (DeVos, 1975; Gordon, 1964:24–29; Royce, 1982:17–50); (3) the quest for political and social power through exploitation of ethnic identity (Aronson, 1976; Krysan and Lewis 2004; McGuire, 1982; Min 2002; Vincent, 1974); and (4) the sociobiological importance of extending kinship ties and altruistic behavior (van den Berghe, 1981). As a result of this diversity of opinion, the very concept of "ethnic group" remains multifaceted and to some degree unclear. Deciding what factors should be emphasized in historical archaeological research has not been accomplished easily.

A definition potentially useful to historical archaeologists is one that recognizes the ethnic group as a special kind of social group, one serving two related functions (Staski, 2002a). A social group can be defined as a "collectivity whose members share common beliefs, values, attitudes, standards of behavior, as well as symbols that represent that group" (Henry, 1987:360). What makes an ethnic group distinctive is that it provides members with a symbolically ascriptive and exclusive subculture with which to identify and allows members to confine primary relationships to others within this subculture.

"Ascriptive" means that members must be born into the group, while "exclusive" means that group membership is fixed. In truly ascriptive and exclusive groups—a caste is a good example—membership is determined by sociocultural criteria that cannot be easily manipulated by individuals. These groups have clear, firm boundaries, and attempts to move from one group to another can often prove futile. The ascriptive and exclusive qualities of ethnic groups are strictly symbolic, however, and individuals are often provided with opportunities to change the groups with which they are identified. They can consciously manipulate the symbols of ethnicity and, when successful, can use these symbols to claim or reject ethnic group membership.

As mentioned, the second function of ethnic groups is to allow members to confine primary relationships to others within the symbolically ascriptive and exclusive group. Primary relationships are those that are personal, intimate, informal, face-to-face and require the involvement of the entire personality (Gordon, 1964:32). Identification with the ethnic group serves to establish these relationships with others who claim the same identification and, by doing so, appears to enhance social integration. Ethnic groups also provide familiar settings and economic support to individuals through the process of networking (Praetzellis et al., 1987). Finally, traditional culture, religion, language, and a sense of common origin are often kept vital within ethnic groups, a characteristic that distinguishes them from social clubs and occupational associations. All of these functions of ethnic groups are especially useful among immigrants in large, complex societies, for whom the external sociocultural system can be quite impersonal and unsupportive (Helms, 1978).

A useful definition of assimilation must logically follow from this definition of ethnic group (Staski, 2002b). "Assimilation" is therefore defined as a process that, if completed, eliminates the need for and the operation of the two ethnic group functions described previously. Acculturation, it should be pointed out, is merely one aspect of this process, the one that eliminates particular behavioral and material patterns that symbolically distinguish those individuals who are members from those

who are not. The balance of the assimilatory process involves structural changes necessary to alter patterns of primary relations. These include structural assimilation, a pivotal process by which primary relationships are rearranged (Gordon, 1964:61–81).

Historical archaeologists have emphasized acculturation in their studies at the expense of all other aspects of assimilation. It is easy to see why. Studying patterns of behavior and patterns of material culture is, after all, what archaeologists do. Other aspects of assimilation are not so easily observed archaeologically. Unfortunately, these other aspects are significant and meaningful to both the people undergoing assimilation and others interacting with them in the context of culture contact and change (Gordon, 1964, 1978). They need to be understood if the nature and the history of assimilation are going to be grasped in any important sense. This is particularly true of structural assimilation.

Some methodological suggestions on how archaeologists might study structural assimilation are presented by Ennes and Staski (1995). They focus on how Hispanics and other Euroamerican people have interacted in the southern New Mexican town of Las Cruces. It is argued that the relative placement of graves in historical-period cemeteries (for which there are grave markers reflecting date of death and ethnicity) is a measure of the degree to which primary relationships were maintained among ethnic group members. Both acculturation *and* structural assimilation seem to have increased through time, in this case.

What appears so outstanding about Asian Americans is that they experienced little of either acculturation or structural assimilation. The seeming resistance to all forms of assimilation has been observed by historical archaeologists in several realms.

Spatial Separation

The spatial separation of Asian Americans from non-Asian Americans is the most obvious of these various realms, and so it is considered first. In urban areas, spatial separation was maintained by the establishment of Chinatowns and similar insular neighborhoods. In rural areas, segregated Asian American camps and settlements were the norm. Domestic and occupational activities were often restricted to these places. Asian Americans, apparently, did not spatially mix with other people very much (Dubrow, 2000).

Internally, these neighborhoods and settlements were distinctive in several spatial senses, further symbolizing the resistance to assimilation. Residents of Chinatowns were compelled to occupy structures designed and built (and often previously occupied) by non-Chinese. These residents were almost always too poor to own the structures and could only rent from absentee landlords. Thus, they had little influence over architectural form and layout on a grand scale. Asian Americans in rural settlements also appear to have had limited influence, though in these places spatial arrangements were dictated more by occupational demands. Still, it is notable that many minor (and some not so minor) spatial alterations were achieved, giving Chinatowns and other settlements across North America a distinctive spatial sense.

Domestic and occupational spaces were often contiguous, or even overlapping. This was especially true in crowded urban settings occupied by Asian Americans, and it continued well after the time when these spheres had been separated in other neighborhoods (Rothschild, 1990). Diverse activities were concentrated behind structures—in private, enclosed places hidden from general view. Floor plans were nevertheless often long and narrow, so that there could be numerous openings directly onto the public street (Greenwood, 1996:141). Of course, these and several other spatial characteristics might more directly reflect economic conditions rather than ethnic distinctions.

However, the principles of *feng shui* were possibly followed to varying degrees, though historical archaeologists have found it difficult to determine how, or how much (Greenwood, 1993:384–386; Sisson, 1993:38–39). These principles influenced structural location, form, and orientation in an attempt to bring human action into harmony with the natural world. A structure should be located to the north of a calm body of water, for instance, its front directed toward the south (i.e., overlooking the water). It should be square or rectangular, as should the settlement in which it is located. The entire settlement, ideally, should be oriented along the north–south axis.

These and other *feng shui* principles might be reflected at certain Asian American archaeological sites, though, as mentioned, it is likely that many of the observed spatial patterns (including many not even remotely related to *feng shui,* though potentially of ethnic significance) are more the result of economic expediency. Indeed, economic conditions seem to have resulted in a wide array of distinctive spatial characteristics. Chinatowns were crowded because most Chinese immigrants were poor. Alleyways and streets were filled with animals and surplus goods because residents could not afford to keep them elsewhere. Refuse accumulation was a constant problem because many government and other authorities failed to provide adequate sanitation services to these poverty-stricken neighborhoods.

Sociocultural Separation

Sociocultural separation was maintained by Asian Americans by the transference of traditional organizations to America (e.g., family associations, district societies, and the tongs) and by the establishment of insular leadership hierarchies that paralleled those of the dominant, Euroamerican society (e.g., the election of "mayors" and "aldermen" within Asian American communities, independent of American politics and law). There were also very few biethnic marriages among Asian and non-Asian Americans, despite a general absence of Asian women during the first several decades of Asian American history (cf. Greenwood (1993, 1994, 1996:20–21), who points out correctly that there were relatively few women of *any* ethnic identity on the American frontier; see also Hardesty (1994) and Wegars (1993) on Asian American women). By these means, Asian Americans sustained a level of cultural self-sufficiency that might have been greater than that enjoyed by other immigrant groups.

The experiences of Chinese Americans in El Paso, Texas, reflect this ability to be culturally self-sufficient, despite certain difficulties (Staski, 1985:24–31; also see Staski, 1993). Edward Rhoads's (1977) innovative study of grave markers in the Chinese section of Concordia Cemetery suggests that almost all of the Chinese in El Paso came from the "Four Counties" region of Guangdong Province, with over half from Taishan, about one-third from Kaiping, and the remainder from either Enping or Xinhui. Although these locales are near one another, the rigors of emigration and, specifically, the absence of women and other kin made it impossible to maintain previous sociocultural ties. In their place, the overseas branch of the revolutionary Triad Society (the Chee Kung Tong) gradually became a central institution of the El Paso community. By 1892, a decade after the settlement began, almost half of the city's Chinese belonged to this ritual brotherhood. Its influence, particularly its role in giving economic support to members (see below), continued to grow throughout the remainder of the nineteenth and early twentieth centuries (Rhoads, 1977).

By the end of the nineteenth century, the cultural self-sufficiency of El Paso's Chinese community had reached a degree that "they even had their own unofficial but universally recognized 'mayor,' who in the period around 1910 was the cafe owner Mar Wing Kee" (Rhoads, 1977:13–14). This "mayor" was undoubtedly the agreed-upon leader of the community, a recognized position of authority commonly found in Asian communities across America (Light, 1972; Staski, 1985:29).

Economic Separation

Great efforts were made by Asian Americans to maintain economic ties to their homeland, especially so that traditional materials and commodities could be acquired. Additionally, particular occupations were preferred among Asian Americans. Many of these occupations could be practiced within the Asian community, contributing to segregation at the workplace. While many Asian American men came to the United States in order to make more money than they could at home, they did not want to become active or permanent participants in the American economy.

In El Paso, growing economic self-sufficiency within the Chinese community is obvious in both the documentary and archaeological records. A number of Chinese merchandise stores, carrying goods from China and other Asian nations, were

in operation several years after the establishment of Chinatown. Three of these stores existed in 1886 (Farrar, 1972), seven by 1892, and eight by 1907 (Rhoads, 1977). It thus appears that El Paso's Chinatown enjoyed increasing economic self-sufficiency through time, as ties to the west coast and China became stronger.

Archaeological data support this view. However, it appears that a portion of the Chinese community preferred certain non-Chinese materials during the later years of the community's existence, despite the increasing availability of Chinese goods (see Staski (1985:96–243) for methodological details). The data suggest that just over half of all ceramic materials used by *all* associated Chinese residents were coming from China during the early 1890s. By the late 1890s, this figure had climbed to over 60%. Then, by the early twentieth century, over 85% of the ceramics used by *some* of these Chinese residents were manufactured in China. It seems that the growth of economic self-sufficiency in El Paso's Chinese community is archaeologically observable.

Yet, as mentioned, only some members of the community were depending on Chinese ceramics to a greater extent as availability improved. Only certain early twentieth-century deposits contain about 85% Chinese ceramics and 15% non-Chinese ceramics. Other contemporary deposits suggest a concurrent decline in dependence at this time (down to about 10% Chinese ceramics and 90% non-Chinese ceramics). Thus, the overall temporal pattern is one of initial overall increase of dependence followed by a growing range of dependence on Chinese goods. These complex data might reflect a degree of acculturation among certain members of the community.

Behavioral Separation

Studied by historical archaeologists since the beginning of Asian American research, behavioral separation was maintained in a number of ways. These included the relatively successful preservation of distinctive patterns of diet and dress. Archaeologists are, of course, uniquely qualified to study patterns of behavior, though they should not do so at the expense of other issues. With particular relevance to this discussion, we should not limit ourselves to studying the lack of significant acculturation and ignore the lack of assimilation in general (see elsewhere in this chapter). A certain amount of assimilation (i.e., acculturation) nonetheless occurred among Asian Americans, even in the more traditional behavioral arenas of diet and dress, and the evidence for it deserves mention (cf. Fong, 1980:5–6).

Dietary patterns are most often inferred from the highly distinctive traditional Asian ceramics, ubiquitous at Asian American archaeological sites. These patterns are also evident in the unique macrobotanical and faunal assemblages to be recovered (e.g., Diehl et al., 1998). Chinese ceramics can be placed in two broad functional (and stylistic) categories: (1) brown, stoneware vessels used to transport and store foodstuffs, including food jars of various sizes, soy sauce jars, and wine jars and (2) porcelain tablewares of various forms (e.g., tea cups without handles, spoons, bowls from which food was eaten, larger bowls from which food was served) and styles (e.g., Double Happiness, Bamboo, Celadon, and Four Seasons types). These have all been described in detail elsewhere (Frierman, 1983; Greenwood, 1996:67–86; Olsen, 1978). The abundance of the stoneware vessels is commonly used as evidence for the heroic efforts immigrants made to maintain their traditional diet, while the presence of the porcelains is thought to reflect the continuation of the traditional table service.

Evidence for acculturation nevertheless appears with the presence of Euroamerican and other non-Asian ceramics within many contexts of almost all Asian American archaeological sites. The ceramic assemblages unearthed in downtown El Paso, described previously, are not uncommon.

Acculturation is also suggested in patterns of dress. Certain Asian American men appear to have worn a significant amount of western clothing, though not all the time. This clothing supplemented rather than replaced traditional Asian attire. Men would wear it when they were in contact with the non-Asian American community, when it served their cultural and economic purposes to do so (i.e., when it would minimize discrimination and maximize cultural and economic returns), and when it was practical (e.g., when harsh working conditions

required it). Viewed this way, the use of western clothing by Asian American men appears to be more adaptation than assimilation (Lyman, 1976; see below). Regardless, the archaeological record from Asian American contexts is replete with leather shoe parts, buttons from western shirts and other articles of clothing, and other durable items of men's haberdashery (e.g., Greenwood, 1996:87–91).

Linguistic Separation

Many Asians did not learn English, Spanish, or any other language when they immigrated to America. The cultural and economic self-sufficiency enjoyed in many of their communities, combined with the desire among most immigrants to be temporary residents only, made linguistic assimilation unnecessary. The general isolation of these same communities together with the ubiquitous hostility exhibited by non-Asians made it difficult.

Still, a certain degree of emerging bilingualism is evident in both the archaeological and documentary records. Certain recovered glass and ceramic vessels, originally holding a variety of products, exhibit embossed writing or labels in more than one language (usually Chinese and English). The fact that many of these vessels formerly contained proprietary or other medical products suggests that health practices involved a degree of assimilation unseen in other arenas (see also Greenwood, 1994, 1996:109–116).

Two glass bottles recovered from El Paso's Chinatown illustrate bilingual usage. The label on one American-made beer bottle advertises in Chinese a "wine" considered by some to be useful in promoting male virility (Fig. 1 [from Staski, 1985:Fig. 9.1]). The brand name, type of alcohol, and supposed results of its consumption are all described. The other artifact, a familiar Dr. J. Hostetter's Stomach Bitters bottle, has a Chinese label advertising some sort of liquid useful for the cleaning of clothing (Fig. 2 [from Staski, 1985:Fig. 9.2]). What is most remarkable about these two bottles is that their labels bear both Chinese and English writing.

The beer bottle clearly has the word "CHINA" written near the top. The Hostetter's bottle has a portion of the English statement ". . . moved to 513 Sixth . . ." written along the side. Additionally, of course, they both contain a fair amount of information in Chinese. It is unquestionable that these bottles, and the contents within them, were intended for Chinese American consumers, and so a degree of linguistic assimilation is suggested.

Fig. 1 An American-made beer bottle recovered from downtown El Paso, Texas. The Chinese writing on the label advertises a "wine" that promotes male virility (from Staski, 1985:Fig. 9.1)

Summary

Historical archaeologists have tried to explain why there was so much resistance to assimilation among Asian Americans. They have suggested a combination

Fig. 2 A Dr. J. Hostetter's Stomach Bitters bottle recovered from downtown El Paso, Texas. The Chinese writing on the label advertises a product useful for cleaning clothes (from Staski, 1985:Fig. 9.2)

of internal and external factors. The former include the general Asian American desire to stay in the United States for a short time only (at least during the early history of immigration), while the latter include the widespread discrimination imposed by the greater society. These and other factors seem to have had a dramatic impact on the Asian American experience.

Greenwood (1994) offers some cautions regarding the uncritical acceptance of this scenario. She correctly argues that Asian Americans as a population might have been less homogeneous throughout their history than is often assumed (see also Fong, 1980:12). Their experiences and reactions to these experiences were varied, too. Indeed, the evidence for assimilation might be better explained as a reasonable, necessary adaptive strategy carried out by a minority in a foreign land who nevertheless maintained a degree of ethnic separation (e.g., Lyman, 1976). Thus, much of it was "acculturation only" (Gordon, 1964), exhibited only when it was culturally or economically useful (the use of western clothing is a possible example; see above). Further

consideration of this possibility will undoubtedly result in a more precise understanding of the issue.

Future Directions and Concerns: Recommendations

Asian American historical archaeology has not reached its full potential in a number of important ways. Several recommendations for future directions and developments can be preferred [see a similar discussion in Greenwood (1993)].

Expanding the Horizons

First, there is a need to conduct comparable historical archaeology in Asia, in those areas from where Asian Americans originated. Doing so would supply "baseline" data reflecting the conditions of life among those who emigrated. Material culture as well as documents originating from the emigrants should be investigated. There is also a need to conduct ethnoarchaeology in Asia. Although admirable ethnoarchaeological research has been done (e.g., Longacre and Skibo, 1994), none of it has been designed to address questions regarding Asian emigration to the western hemisphere. Studies of this kind could be very informative.

There is also a need to conduct additional, comparable historical archaeological research (along with ethnoarchaeology) in all those places where Asian emigrants settled. Research should once again be designed to address issues of emigration. At this time, most projects have been located in the western United States. Only a handful of studies have occurred elsewhere, and some of these are only marginally related to American historical archaeology. Locations include Africa (e.g., Sassoon, 1978; Woodward, 1974), New Zealand and Australia (Bell 1996; Jack et al., 1984; Ritchie, 1983, 1986, 1993), and Canada (e.g., Kerr, 1979; Kerr and Bugslag, 1978). Almost all of the Asians studied in these places were not Asian *Americans*, of course. Learning more about their experiences would, nonetheless, help clarify Asian American history. Understanding the Asian immigrant experience worldwide would help illuminate that experience in any particular place.

Finally, there is a need to conduct ethnoarchaeological studies among current residents of Asian American communities. Oral history, providing an additional avenue of inquiry into the recent past, should be an integral part of such research. Many Asian American settlements, especially the numerous Chinatowns formerly present in so many American cities, survived well in the twentieth century. Those that persist today exhibit cultural and behavioral continuity with the Asian American past and are thus settings for potentially fruitful research.

Methodological and Substantive Advances

There is a need to develop better temporal controls over Asian American material culture assemblages. Without them, the comparative study of changing Asian American experiences will remain unsophisticated. Historical archaeologists generally have data that can precisely date the material remains of interest (e.g., documents and certain formal characteristics on artifacts that reflect manufacturing technology and use). The nature of Asian material culture, however, has resulted in certain unique dating problems. Many technological and stylistic traditions appear to have survived over long periods of time, and certain items (e.g., coins) are known to have been reused over decades and even centuries. Precise dating has thus been unattainable at many Asian American sites and will remain so until better strategies are developed (see Greenwood, 1993, 1996).

Similarly, there is a need to develop better methods of artifact and feature identification, and better systems of classification (see, e.g., Steele, 1993; Stenger, 1993; Wegars 2003a, 2003b). It is especially important to create meaningful, informative ceramic classifications that reflect historical and cultural reality (ethnoarchaeology might be very useful in accomplishing this task; see previous discussion). These classifications should be designed so that they can be used uniformly at the greatest number of Asian American sites possible, so that comparative studies can be undertaken (Greenwood, 1993, 1996).

Additionally, there is a need to investigate a greater range of historical and cultural contexts. A rather limited number of contexts have been focused upon to date (e.g., urban Chinatowns, mining camps, railroad camps, and some fishing/agricultural areas). Certainly, Asian Americans lived in other settings that, perhaps as a result, have escaped archaeological attention. There is also a need to study categories of material culture (and related behaviors) beyond the ceramic and faunal remains that have received so much scrutiny. Architectural forms and general issues regarding the Asian American landscape deserve more study. Items of personal adornment, such as clothing and jewelry, should be investigated further. Botanical remains reflect so much of the Asian American diet and should be given as much (if not more) attention as animal bones. The material correlates of mortuary practices need to be researched extensively (Chung and Wegars, 2005).

More interdisciplinary work on the Asian American experience should be conducted. Historical archaeologists must more thoroughly incorporate the scholarly contributions of historians, sociologists, cultural anthropologists, geographers, and others. A number of valuable contributions from these disciplines are now available (e.g., Anderson, 1988; Barth, 1964; Daniels, 1988; Chang, 1977; Chen, 1980; Great Basin Foundation, 1987; Knapp, 1986; Krysan and Lewis, 2004; Mark and Chih, 1982; Min, 2002; Spier, 1958a, 1958b; Takaki, 1989). Interdisciplinary work coordinated by historical archaeologists would result in many more, of even greater value. Academic departments of Asian Studies would be good places to begin coordination efforts.

Finally, there is a need to broaden our focus, from an almost exclusive concern with Chinese Americans to a broader and more representative concern with Asian Americans of all national and ethnic identities. In a related sense, it is important to stop viewing Asian Americans (or Chinese Americans, or even Chinese Americans from Guangzhou) as a monolithic, tradition-bound, universally impoverished group that has exhibited neither variation nor change (see Stapp, 1993, and Greenwood, 1993, for enlightened views). Asia, the largest and most populous continent on earth, has for millennia exhibited enormous sociocultural and economic diversity. People from many ethnic and economic backgrounds immigrated to America and elsewhere over the past centuries. Historical archaeologists need to investigate the Asian American experience in the broadest possible historical and cultural contexts.

Theoretical Advances

There is a need for additional archaeological research into the nature of ethnic identity, culture contact, assimilation, and the various other ways Asian Americans have responded to their circumstances. Historical archaeologists must demonstrate to themselves and other scholars that they can make important, unique theoretical contributions. Admittedly, this argument has been made ad nauseam, it seems, for at least 40 years; and yet, little has changed. The seemingly never-ending image of archaeology as a "strategy of last resort," a "handmaiden to history" that is somehow not as theoretically rigorous as other intellectual endeavors must finally be put to rest.

In summary, there is great potential for Asian American historical archaeology. The venues and topics explored could (and should) be expanded. Methodological, substantive, and theoretical advances must continue, resulting in more mature and rewarding scholarship. There is little question that this expansion and advancement will occur. Interest in the Asian American experience is being expressed by a growing number of historical archaeologists, and there is no apparent reason why this interest will diminish.

Conclusions

Asian American studies in historical archaeology continue to thrive and mature. The primary theoretical and methodological concern remains the recognition and interpretation of ethnic identity and assimilation. These studies are becoming more impressive, though it is clearly the case that improvements are possible. It is likely that these improvements will result in a clearer, more precise understanding of the Asian American experience.

They might even result in a fundamental reassessment of some basic assumptions.

Indeed, perhaps in the final analysis, Asian Americans will be viewed as not so very different than other immigrant groups to the western hemisphere. Perhaps they resisted (and were discouraged from) assimilation to about the same degree as others. Nearly all immigrants to America, after all, have found it distasteful and difficult to reject their heritage in order to accommodate the host society. In turn, the host society, no matter when and no matter what its ethnic composition is at the time, has made a concerted effort to keep immigrant ethnic groups separate, so that they could not shape "mainstream" culture in any manner whatsoever. Members of the host society—earlier immigrants—have shared a belief that they assimilated relatively easily when compared to the experiences of current immigrants, but this has never been the case. The particular ethnic groups involved in this dynamic relationship have changed through time; the myth has remained constant.

The history of certain ethnic group relations in North America is revealing. From Colonial times to the mid-nineteenth century, English residents in the east resisted the influences of Irish, Welsh, and German immigrants, among others. Then, from the mid-nineteenth through the early-twentieth centuries, residents of English, Irish, Welsh, and German ancestry acted in unison (as if they had by then become the mainstream) to resist the influences of eastern and southern Europeans, and Asians, who were by that time arriving. Finally, from the early twentieth century until today, there has been growing resistance among the most recent version of the mainstream (including descendants of English, Irish, Welsh, German, eastern and southern European, and many Asian immigrants) to the influences of Hispanic and other immigrants (see Levine, 1996:121–131). The long history of Hispanic influences in the west is, of course, another story altogether. And all along, Native Americans and African Americans resisted giving up those aspects of their heritage that they could maintain, while the host society kept them marginalized.

In reality, the ethnic composition (and thus the cultural fabric) of the American mainstream has experienced constant change. All ethnic immigrants have resisted total assimilation. To a surprising degree, they have succeeded and, by doing so, have reshaped American culture despite the best efforts of the mainstream. When studying ethnicity, historical archaeologists need to sufficiently recognize the ever-changing nature of this culture, this mainstream of numerous currents that are always being introduced, if they are to contribute significant insights into American history.

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Part II
Historical Archaeology on a Global Scale

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Family Resemblances: A Brief Overview of History, Anthropology, and Historical Archaeology in the United States

Barbara J. Little

Introduction

Historical archaeologists in the United States work in a variety of professional settings, embrace a wide range of theoretical orientations, choose different methodological approaches for interpreting data, and specialize in diverse techniques. Practitioners get their training in a handful of different academic departments such as anthropology, archaeology, American studies, and history.

In assessing the state of the subdiscipline a generation ago, Kathleen Deagan (1982) summarized the intellectual contributions of historical archaeology as (1) historical supplementation, (2) reconstructions of past lifeways, (3) processual studies, (4) cognitive studies, and (5) contributions to archaeological science. Writing more than a decade after Deagan, I combined her second, third, and fourth categories under the heading of historical ethnography, which is meant to include ethnology so that nothing of interest to traditional cultural anthropology is excluded (Little, 1994). The resulting three categories of goals—historical supplementation, contributions to archaeological method, and historical ethnography and ethnology—represent historical archaeology's contributions to the disciplines most closely associated with it. Respectively, those are history, the broader field of archaeology, and anthropology.

The debate of the 1960s over whether historical archaeology should be considered (and influenced by) anthropology or history has quieted down, although it does resurface periodically as some archeologists call for separate academic departments (e.g., Wiseman, 2002). For the most part in the United States, however, anthropology is seen as the most desirable home for the discipline (e.g., Majewski, 2003), even if historical archaeologists often express their intense frustration at being ignored by historians (e.g., Lees and King, 2007).

This essay is about some of the changes and interrelationships of these disciplines through five time periods: through the 1930s, the 1940s and 1950s, the 1960s and 1970s, the 1980s and 1990s, and the new century. I have written it from the perspective of a historical archaeologist who, although trained primarily by prehistorians in departments of anthropology, made occasional extensive excursions into history departments. I also owe some of my perspective to undergraduate immersion in the interdisciplinary experiment known as "Science, Technology, and Society" (STS), which taught me both a healthy skepticism of tight disciplinary boundaries and a respect for disciplinary expertise. I also write from the vantage point of a practicing archaeologist in the federal government for over 15 years.

I have written this chapter for the current handbook because I believe that historical archaeology has the potential to be a powerfully engaging practice that merges perspectives and expertise from social science, humanities, and intentional public scholarship. It is more likely to become that practice when its practitioners have a broad understanding and appreciation of—as well as appropriate caution toward—the many threads of academic and applied work that have influenced the development of the field (see Postscript to this chapter).

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Through the 1930s

Historians Joyce Appleby, Lynne Hunt, and Margaret Jacob (1995:42) present a modern starting point for considering the development of historical archaeology's parent disciplines. They remark on the result of eighteenth-century intellectual turmoil: "Out of the crucible of the eighteenth-century revolt against tradition came the human sciences, first history, then psychology, sociology, and anthropology." In the early twentieth century, the main questions for all the social sciences concerned how the modern world came about and resulting lessons for the rest of the world. Marx, Durkhiem, and Weber inspired the main schools of western historical interpretation in the twentieth century: Marxism, the Annales School, and American modernization theory, respectively. Scholars imagined all of these approaches as universally applicable and scientific (Appleby et al., 1995).

In tandem with the establishment of anthropology, American progressive history emerged between 1890 and 1900 and became a mature and influential school of thought by the 1920s. The 1890s saw the professionalizing of history as well as anthropology and the emerging idea that historians could create a true historical science. The disciplines grew under similar influences. Historians' fascination with Darwin's evolutionary model created an "ill-defined theoretical mix of traditional critical document analysis, genetic or evolutionary interpretation, and positivist faith in data" (Breisach, 1993:17). The progressive historians, who believed in progress and social reform, sought close ties with the social sciences, which historians considered modern because of their evolutionary stance.

Mainline scientific history and progressive history were battered by the Depression, European influences, and the doubts of the leading American historians of the day: Carl Becker and Charles Beard. These men saw a stark alternative between total certainty and no certainty at all. Becker's 1931 presidential address to the American Historical Association, entitled "Everyman His Own Historian," declared that all understanding was shaped by the climate of opinion and the myths of the people. He wrote (quoted in Hodgen, 1974:12), "In the history of history, a myth is a once valid but now discarded version of the human story, as our now valid versions will in due course be relegated to the category of discarded myth."

Two years later, Beard's presidential address, "Written History as an Act of Faith," strengthened the relativistic theme. Becker and Beard introduced relativism and a "new period in American historiography in which the full impact of modernity's radical doubts were being felt" (Breisach, 1993:176). Other historians challenged such relativism in the wake of Nazi and Soviet manipulation of history. The end of World War II coincided with the end of progressive history's faith in inevitable progress.

African American scholars fought against the denigrating "myth of the Negro past," which essentially denied that African Americans possessed either history or culture. Carter G. Woodson, known as the father of Black history, published *The Mis-education of the Negro* in 1933 to reclaim African American history, especially from the Southern Revisionist historians who were busy recasting the Confederacy and framing the "Lost Cause." Anthropologist Melville Herskovits, known for naming that myth, joined African American scholars in combating it (Blakey, 2001). His search for "Africanisms" and a distinct African American culture inspired historical archaeologist Charles Fairbanks decades later to excavate slave cabins at the Kingsley Plantation in Florida and thereby initiate African American archaeology (Fairbanks, 1974).

During the 1930s, historians conceived of social history quite narrowly. Most of the 13 volumes in the *History of American Life* series, edited by Arthur M. Schlesinger and Dixon Ryan Fox between 1927 and 1948, were published by McMillan in the 1930s (Schlesinger and Ryan, 1927–1948). The work of Alice Morse Earle, Elizabeth Dexter, and Julia Spruill also falls into this early social history of household living practices and the daily life of women and children. According to historian Alice Kessler-Harris (1990), much of this history tended to be anecdotal and contributed to myths of past glory. Mainstream historians regarded social history as peripheral to the dominant story of progress. This era of social history, however, had a positive side for historical archaeology by including material culture as a subject worthy of scholarship and in acknowledging women's roles.

In the development of archaeology during the late nineteenth century, classical archaeologists

first perceived of the need for better archaeological method through tight chronological control to look at historical questions. At this time, classical archaeologists began to search for ways to "corroborate and expand what was known about their history from written records" (Trigger, 1989:196). They realized the need for chronological control and then developed methods to gain such control.

Classicists' work in stratigraphic excavation spurred prehistorians to record their data more carefully. At the turn of the twentieth century, a revolution in methods changed archaeology in the Americas. Several archaeologists recognized that they needed to view the past as having a long time depth rather than the short-term view that had dominated North American prehistory. This realization stimulated a change in the actual method of excavation after 1910. The change in archaeological method that occurred between about 1910 and 1920 was similar to the intense change occurring a few generations later during the 1960s and 1970s. In leading the stratigraphic revolution, A.V. Kidder, Nels Nelson, and Manuel Gamio deliberately set out to revolutionize the discipline and borrowed European methods to do it (Browman and Givens, 1996).

Prior to the stratigraphic revolution, archaeologists were looking for cultural stability and were determined to find it. They attempted to verify the ethnographically created cultures that were imbedded in the cultural anthropology of the time, based on the evolutionism of E.B. Tylor and Lewis Henry Morgan. Such influential anthropologists as Kroeber rejected the idea of stratified archaeological sites. As late as 1930, Edgar Hewett (quoted in Browman and Givens, 1996:91) wrote dismissively of the stratigraphic method: "there are those who apparently look upon cultural stratification as embracing the entire science of archaeology and who regard the pottery record as the key that is to unlock the doors of antiquity. Just why chronology should be considered of such vast importance is difficult to understand." In a clear interrelationship between theory and method, only the break away from evolutionary theory made the stratigraphic revolution possible.

Unilinear evolution held that every society progressed through the same stages in a march toward western civilization. While it was the dominant theoretical orientation of anthropology, there was little that archaeology could contribute beyond illustrative antiquities because ethnography of "disappearing" cultures was thought to adequately document the full range of human history. Franz Boas, the father of academic archaeology in the United States, offered an alternative to evolutionary theory, and archaeologists embraced it. The culture-history approach, enabled by stratigraphic method and greatly influenced by Boas, dominated prehistoric archaeology through the 1930s. Archaeologists conceived of cultures as conservative, changing only through diffusion or migration. The culture historical approach looked to culture areas and diffusionism and Boas's ideas of cultural relativism and historical particularism (Trigger, 1989).

Functionalism in U.S. archaeology in the late 1800s and early 1900s was concerned with the manufacture and use of artifacts. Trait lists of early twentieth-century archaeology were akin to the lists created by historians doing what was then called social history. Large-scale, Depression-era, publicly funded excavations that exposed large areas and revealed features, houses, and village plans encouraged functional aspirations and renewed ties with ethnologists in the 1930s through the development of the direct historical approach (Trigger, 1989). Archaeology as a profession received a boost through such federal funding. It also benefited from public laws and the establishment of federal agencies.

The modern preservation movement got started during the last quarter of the nineteenth century. Strong public interest in antiquities, which had been stimulated by the "mysteries" of the Mound Builders (Silverberg, 1968) since European settlement, continued. In 1893, the World Columbian Exhibition in Chicago introduced the American public to the country's antiquities (Hinsley, 1991). Avocational archaeologists established many state organizations in the 1920s, prior to the establishment of the Society for American Archaeology as a professional organization in 1934.

In 1892, President Benjamin Harrison issued an executive order to establish Casa Grande Ruin as the first national archaeological reservation. Other efforts to protect specific and spectacular resources led to the Antiquities Act, which in 1906 established the basic preservation policies of the U.S. federal government. Francis McManamon (2006:171) comments on the impact of the act on the

development of archaeology as a profession: "the federal government supported the professionalization of the young discipline of archaeology … [by making specific requirements] necessary for the development of typological and stratigraphic description and analysis that would become methodological and technical standards for professional organizations in the United States."

The Antiquities Act was the foundation for later acts that extended the policies to other kinds of historic properties (Harmon et al., 2006). The next major preservation act built upon the values of noncommercial value and public benefit established in the Antiquities Act. Section 1 of the Historic Sites Act of 1935 (16 USC 461–467) states: "That is hereby declared that it is a national policy to preserve for public use historic sites, buildings, and objects of national significance for the inspiration and benefit of the people of the United States."

Other influential government initiatives impacted American anthropology and archaeology. These included the establishment of the Smithsonian Institution in 1846 and the formation of the Smithsonian Bureau of Ethnology by John Wesley Powell in 1879 to study the "disappearing" Native societies in America. The creation of the National Park Service (NPS) in 1916 boosted the preservation of public lands, many of which included archaeological sites. Jamestown and Yorktown were added to the park system in 1934. Federal relief during the Depression funded a great deal of archaeology and was important in stimulating methods to handle large-scale projects. John Cotter, whose 60-year career began in the 1930s, has remarked (quoted in Roberts, 1999:42): "If it hadn't been for WPA archaeology, I don't think we would have had the 'New Archaeology' developing as it has."

Historical archaeology had its professional beginnings and first flourished in the context of these preservation laws. Later in his career, J.C. Harrington (1994) attributed the myopic, architectural focus of the discipline's early years to the role of historical archaeology as part of the preservation movement. It was common practice in the 1930s for architects, rather than archaeologists, to excavate and interpret structural remains. The 1920s and 1930s saw John D. Rockefeller's establishment of Colonial Williamsburg, which set new standards for historic preservation and, in turn, influenced federal agencies like the NPS as well as private organizations. The preservation movement developed under the same social context that influenced academic disciplines, but practitioners labored with very different expectations and goals. The thread of filiopietistic (i.e., relating to an often excessive veneration of ancestors or tradition) commemoration has run through the preservation movement since its beginnings and has remained strong.

Some of the first large-scale excavations in historical archaeology in the country were funded by federal relief monies (Lyon, 1996). Major archaeological projects in Jamestown took place between 1934 and 1941. From 1935 to 1939, the Peabody Museum conducted excavations at Awatovi, one of the Hopi towns affected by the Pueblo Revolt of 1680 (Montgomery et al., 1949). Ralph Brown undertook excavations under the auspices of the Civilian Conservation Corps Indian Division in 1936 and 1937 at the fur trade post of Grand Portage in Minnesota with an Ojibway crew (Brown, 1937; Woolworth, 1963). In 1935, an NPS team explored the missions of northern Sonora, Mexico. Their purpose was to collect architectural and historical information to be used, in part, for the accurate construction of a museum and visitor center at Tumacacori, Arizona. The most extensive archaeological work was done during 1934 and 1935, funded by the Federal Emergency Relief Act (Bleser, 1989).

During the 1930s, "with few exceptions, historical archaeology was the archaeology of post-contact Indian sites or sites of frontier forts and trading posts frequented by post-contact groups of Indians" (Quimby, 1994:117). The archaeology of colonial sites received little respect. Charles Hosmer, a historian of the preservation movement, wrote (quoted in Lyon, 1996:187): "If historians who deserted the universities during the depression were considered second-class citizens in their professional groups, archaeologists who sifted the debris from colonial American sites were heretics."

The heretics continued their work.

The 1940s and 1950s

The intellectual climate, marked by academic dismissal of presumably second-rate work, did not soon improve for historical archaeology. During

the 1940s, archaeology's links with ethnography weakened as archaeology became mainly concerned with typology and chronology and less with reconstructing patterns of past lifeways. The move to a culture-historical archaeology was seen as a switch from "science," which was evolutionary, to "history" and this stimulated the development of methods. Debates over typology that raged in the 1930s and 1940s marked important attempts to make the discipline's methods explicit (Trigger, 1989).

Archaeologists also felt a "growing disillusionment with their discipline, which was perceived to be without theoretical or historical interest" (Trigger, 1989:195). In such a mode, it is difficult to imagine what academically based archaeologists could have found interesting about the historical period, where the chronology was not in question, and typology could only appeal to the museum curator or park interpreter. It is not surprising that the purpose of historical archaeology in this time period was not tied to the intellectual pursuit of prehistorians but to the commemorative pursuits of preservationists and park interpreters. The preservation movement provided an alternative home to these outsider practitioners and contributed to parallel professionalizing of the preservation community. That situation created still-familiar tensions between academics and those practicing outside the academy.

John Griffin (1994:69) describes anthropological training at the University of Chicago from 1939 to 1946:

> the influence of Radcliffe-Brown was still strong . . . we were constantly confronted with the ideal of a science of society. It should also be remembered that culture change and acculturation, both viewed as processes, were popular research orientations. And, it should be remembered that in archaeology, the direct historical approach advocated by Wedel, Strong, and others was new and exciting. This latter, I believe, is underestimated as a conditioning factor for some of us who later turned to the sites of Western European culture.

Walter Taylor (1948) confronted archaeology with the vision of culture then current among ethnographers. Culture, a mental, nonmaterial construct, was a phenomenon of the first order. Human behavior was second order, and material culture was third order. Patty Jo Watson (1995:685) quotes Taylor, writing of the potential of archaeology: "The archaeologist as archaeologist is merely a technician digging up physical materials and their associations, in space and time, but the archaeologist as anthropologist is uniquely qualified to produce truly cultural information about ancient peoples and extinct societies throughout time and space."

Archaeologists all but ignored Taylor, partly because the view of culture he used made archaeology marginal at best. Instead, during the 1950s, archaeologists were committed to one of the definitions of culture, central to the discipline. That was Robert Redfield's version of E. B. Tylor's definition: "Culture is 'an organized body of conventional understandings manifest in art and artifacts which, persisting through tradition, characterizes a human group'" (Watson, 1995).

At the end of the 1950s, cultural anthropology was operating in three major paradigms: the British structural functionalism of Radcliffe-Brown and Malinowski, the American cultural and psychocultural anthropology of Margaret Mead and Ruth Benedict, and the Americanist evolutionist anthropology of Leslie White and Julian Steward. The latter was most closely affiliated with archaeology (Ortner, 1984). Although some archaeologists imagined that there were close ties between archaeology and cultural anthropology during the 1950s, Watson reports the way ethnographers treated archaeologists as nonanthropologists and remarks that anthropology as a whole was not well integrated (Watson, 1995).

The neoevolutionism of the 1950s was like the earlier linear evolution except that there was no room for individual "genius." Culture was defined, in Leslie White's terms, as human's "extrasomatic means of adaptation." In the new evolutionism, the ecosystem was thought to be stable unless some external factor forced a change. Bruce Trigger (1989:292) writes, "Judged by Marxist standards, all of these approaches [Leslie White, Julian Steward, Marvin Harris] are examples of vulgar materialism, because they view human behaviour as shaped more or less exclusively by nonhuman constraints. Marxism, by contrast, includes humanly arranged relations of production in the economic base that determines social change."

Within the history profession, progressive history did not disappear but changed after World War II as it adopted the central theme of progress through conflict. Consensus history, which asserted and

assumed that the nation shared a set of values that overrode ethnic, class, and gender differences, overshadowed other forms of history (Breisach,1993; Kessler-Harris, 1990). "[C]onsensus historians were ad hoc advocates of a self-satisfied age" (Breisach, 1993:207), but they were criticized even in their day. In 1959, John Higham complained of "a massive grading operation to smooth over America's social convulsions" (quoted in Breisach, 1993:207).

After the war and during the 1950s, salvage archaeology was performed in the context of the River Basin Survey and the Interagency Archaeological Salvage Program, which were administered by the NPS and the Smithsonian Institution. Because it was oriented to specific locations and not only to academic research interests, archaeological work in advance of new dam and reservoir construction included historical-period sites.

In addition to undertaking salvage work, historical archaeologists continued to excavate sites mainly for the purposes of reconstruction and visitor interpretation, in some cases rewriting the details of history. For example, Hale Smith's 1947 excavations at the Scott Miller site near Tallahassee and John Griffin's work at San Luis de Talimali comprised the first archaeology of Spanish missions in Florida (Smith, 1994). Archaeology systematically dismantled the local mythical identification of certain ruins as "missions." Research revealed instead sugar mills and plantation buildings (Griffin, 1994). Harrington (1957, 1962) excavated Fort Raleigh (1947–1950) and Fort Necessity National Battlefield (1952–1953). Reconstruction of the forts relied upon archaeological information. At Fort Necessity, a palisade had been erected in 1932, but it needed to be replaced, and the plan was to check the location. Harrington (1994:9) describes the interplay between interpretations of documentary and archaeological data over time: "Here was a case of rather clear documentary evidence having been ignored in favor of questionable [1932] archaeological evidence, which called for an unprejudiced reconsideration of the documents and a redoing of the archaeology. Fortunately, sufficient evidence was left in the ground to make the final conclusions quite clear and certain."

Archaeologists carried out excavations at Jamestown in the 1950s in preparation for the 350th anniversary celebration in 1957. John Cotter (1994:19) calls Jamestown the major example of early "programmed, comprehensive excavation of a large historical site for supporting site interpretation through museum and published media" and remarks that historical archaeology was given a boost in the 1950s when professional archaeologists were hired at places like Williamsburg (Cotter, 1994). Through the 1950s and into the 1960s, however, historical archaeology was truly supplementary to documentary history. Ivor Noël Hume (1964) probably was justified in dubbing the field's purpose as "handmaiden to history." As John Griffin relates in his recollection quoted above, many historical archaeologists, however, were becoming anxious to examine anthropological processes.

The 1960s and 1970s

During the Cold War, consensus historians rejected relativism and returned to "objectivity," often defined as patriotic history. But during the 1950s and 1960s, the broader society challenged the objectivist view of American nationalism with Civil Rights movements. In the 1960s, the new social history emerged. Kessler-Harris (1990:165) describes, "Beginning, then, with the challenge of a divided society, rather than with the assumption of a unified one, social historians took the poor, the black, and the excluded as their special domain and set out to rewrite the history of the United States." Some historians were also explicit about rewriting or renewing the role of history as a political force (e.g., Zinn, 1970). Public history also developed as a way to make research useful to the public.

After World War II, a whole new generation of historians set out to reconstruct the lives of ordinary Americans. These scholars entered school in the post-Sputnik expansion of the 1950s and 1960s. Many were the children and grandchildren of immigrants. These newcomers brought with them a healthy skepticism for the ideology of the profession's insiders. Because they were looking at different segments of society, they devised new methods such as statistics and demographics and used long-ignored types of documents. "Digging away in the public archives for thirty years now, social historians have discovered tales of

frustration and disappointment which cannot be easily assimilated to the monolithic story of American success" (Appleby et al., 1995:148).

French historians Lucien Febre and Marc Bloch had established the Annales School in the 1930s. The Annales School practiced materialist, local, in-depth history characterized by attention to detail, external factors, social science methods, unwritten evidence, rigorous quantitative methods, and the search for underlying structures. In the early 1970s, the "third generation" of Annalistes added to their list of essential topics, mentalité, that is, a version of what anthropologists would call culture. American historians especially borrowed in-depth local studies and attention to material conditions. They added ethnographic techniques (Green and Troup, 1999; Kessler-Harris, 1990).

Not surprisingly, there were opposing intellectual traditions within the social sciences and social history. The behavioral social sciences, especially sociology, looked to Talcott Parsons, sociology's systems theorist of social equilibrium and systemic relations. A newly resurgent Marxism placed primary emphasis on the material, as did the Annalists. Within the latter category, E.P. Thompson's (1963) *The Making of the English Working Class* sought relationships between social and material reality and individual and collective consciousness. Kessler-Harris (1990:167–168) describes the merging of these traditions:

> Where the Parsonians saw social equilibrium as a function of social reality, Marxists saw it as a product of elaborate rationalizations and mechanisms of social control that justified economic inequality. . . . By the mid-1970s, creative elements of the behaviorist and Marxian thought had married to produce a search for the culture of working people that became the leading edge of social history.

The 1960s were a formative period of radical upheaval for many fields. Anthropology, history, and many of the social sciences underwent an upheaval similar, for example, to that in literary criticism where "a volatile mixture of linguistics, psychoanalysis and semiotics, structuralism, Marxist theory, and reception aesthetics had begun to replace the older moral humanism" (Bradbury, 1981:137, quoted in Ortner, 1984:128). Such changes fragmented American anthropology as schools of thought in each subdiscipline reinvented the major assumptions of the field in different ways.

Sherry Ortner describes how, in the 1960s, anthropologists developed three main theoretical threads: symbolic anthropology, cultural ecology, and structuralism. The label of symbolic anthropology covered a number of trends. The two major ones were led by Clifford Geertz, influenced by Max Weber and Talcott Parsons, and Victor Turner, influenced by Emile Durkheim. Turner saw symbols, especially rituals, as producing social transformations. Geertz's radical view of culture became quite influential in archaeology a decade or so later. He saw culture as not inside the head but embodied in public symbols, and thereby gave culture more concreteness than it had before. Symbols were interpreted as the vehicles of meaning and culture. Geertz focuses on "ethos" rather than the more cognitive worldview (Ortner, 1984).

A fundamentally Marxian cultural ecology synthesized the ideas of Leslie White, Julian Steward, and V. Gordon Childe. "If the idea that culture was embodied in public, observable symbols was the key to the liberation of symbolic anthropology from earlier American cultural anthropology, the concept that played a similar role in cultural ecology was 'adaptation'" (Ortner, 1984:132). Anthropologists saw the internal workings of culture as hard to measure and prioritize for causality but saw external factors as fixed, measurable, independent variables subject to scientific understanding. Some practitioners of cultural ecology drew on systems theory. They shifted away from evolution to the adaptive maintenance of systems and looked at ways social and cultural factors functioned to maintain a relationship with the environment.

The bitter debate between symbolic anthropologists and cultural ecologists through the 1960s and into the 1970s has been echoed in the postprocessual vs. processual debates in archaeology in the 1980s and 1990s. Ortner (1984:134) describes the earlier acrimony:

> Whereas the cultural ecologists considered the symbolic anthropologists to be fuzzy-headed mentalists, involved in unscientific and unverifiable flights of subjective interpretation, the symbolic anthropologists considered cultural ecology to be involved with mindless and sterile scientism, counting calories and measuring rainfall, and willfully ignoring the one truth that anthropology had presumably established by that time: that culture mediates all human behavior.

Ortner (1984:135) considers that Levi-Strauss's structuralism may be "only genuinely original social science paradigm . . . to be developed in the twentieth century." Structuralists looked for the universal grammar of culture grounded in the structure of the mind. It had relatively little influence in American symbolic anthropology but great influence in France and Britain. By the early 1970s, there was strong reaction against structuralism in linguistics, philosophy, and history because the approach denied both the intentional subject and the impact of history upon structure. Just as structuralism was being rejected or radically revised by other social sciences, it was beginning to be embraced by historical archaeology (e.g., Deetz, 1974, 1977a, 1977b).

As during all time periods, scholarship in the 1970s was clearly tied to real-world events. The Civil Rights and Women's Rights movements, for example, stimulated whole new subfields of history. Anthropologists denounced their discipline's connection with colonialism and imperialism. Structural Marxism and political economy became strong theoretical stances. Ortner (1984:138) writes, "One does not need to be an especially subtle analyst of the ideological aspects of intellectual history to realize that the absence of a significant Marxist influence before the seventies was just as much a reflex of real-world politics as was the emergence of a strong Marxist influence in the seventies."

Structural Marxism developed mainly in France and England wholly within anthropology. It attacked cultural ecology as vulgar materialism for not considering social and political relations. Structural Marxists converted culture to ideology (Ortner, 1984:140). Political economy developed mainly in the United States and England, greatly influenced by the world systems and underdevelopment theories of political sociology, particularly those of Wallerstein and Frank (e.g., Wolf, 1982). This trend shifted the focus of analysis to a much larger scale. Its practitioners' emphasis of external factors of change and society's adaptation connects this approach to cultural ecology. Political economists, however, were and continued to be more willing to incorporate symbolic and cultural than the cultural ecologists by focusing on symbols and ethnicity or groups. Political economy tends to stress history and is committed to historical anthropology. Both political economy and structural Marxism as theoretical orientations assume that human action and historical process are nearly completely structurally or systemically determined. As Sherry Ortner wrote in the early 1980s, she assessed that anthropology was trying to break free of such determinism.

During the 1970s, anthropology also was moving closer to history. June Nash (1997:22) writes, "The critiques of functionalist studies that reified the status quo under colonialism published in Dell Hymes's (1974) anthology *Reinventing Anthropology* led to an efflorescence of historically situated and empirically grounded writing." Contributors questioned the traditional vs. modern dichotomies and therefore could examine colonized societies within global capitalism. By the early 1970s, colonized subjects became their own ethnographers, and a growing literature called for the decolonization of anthropology. Anthropologists attacked functionalism partly for ahistoricism and the inability to see conflict (Nash, 1997). In turn, historians became enamored of anthropology, discovering culture and Clifford Geertz (Appleby et al., 1995).

Margaret Hodgen (1974) asserted the need to look for new principles so that anthropology and history could get over the interdisciplinary conflict inherited from the eighteenth century. While chiding anthropologists for not being interested in the past, she also observed that historians regard dated cultures as their own and think that if anthropology is to study them, they would have to use historical methods and give up "morphological, classificatory, and scientific interests" (Hodgen, 1974:13).

Although the "essential and enduring elements of the New Archaeology were the collective creation of a considerable number of American archaeologists during the 1950s" (Trigger, 1989:295), Binford's 1962 "Archaeology as Anthropology" started the neoevolutionary "econothink" of the "new," or processual, archaeology. In that framework, the prevailing concept of culture was that of Leslie White: man's "extrasomatic means of adaptation." Archaeology was "materialist, functionalist, and evolutionist in orientation, overtly anthropological and scientific in its aspirations" (Watson, 1995:686). Watson notes that ethnoarchaeology became a subdiscipline of archaeology to explore the living use of material culture, but she does not acknowledge the similar relationship of historical archaeology to the "parent" discipline.

Within archaeology, Elizabeth Brumfiel (1992) summarizes and critiques the ecosystem view prevalent in the 1960s and 1970s and continuing through the 1980s and 1990s. In it, human populations adapt to the environment through cultural behavioral systems. Interaction between whole populations and the environment is the concern, and therefore humans themselves play a limited role in determining culture change. Human actions are a source of variation upon which selection works. In short, the system is the focus rather than the "social actor." Social actors became simply interchangeable units of labor power. The drawbacks of such an approach started to become apparent in the 1970s and early 1980s. The ecosystem approach makes particular sets of actors invisible. It allows contemporary dominant groups to portray people as they please and therefore encourages biased thinking about the past. This system's focus underestimates the difficulties of systemic change. Finally, the approach overestimates external rather than internal causes of change (Brumfiel, 1992).

Throughout society, the 1960s and 1970s witnessed a wide variety of changes. Within the preservation movement the most influential legislative developments occurred during that time, beginning with the passage of the Reservoir Salvage Act in 1960. Of far broader impact was the National Historic Preservation Act (NHPA), passed in 1966. This legislation established the National Register of Historic Places as well as the Advisory Council on Historic Preservation (ACHP) and created the field now known as cultural resource management (CRM). In some ways, the growing influence of the new archaeology can be seen in the way that archaeology was written into the NHPA (Altschul, 2005). The new requirements of NHPA stimulated the growth not only of history and architectural history but also of historical archaeology because of requirements for survey and excavation of archaeological sites from all time periods.

Other developments in historic preservation included the Moss-Bennet Bill or the Archaeological and Historic Preservation Act of 1974, the Archaeological Resources Protection Act (ARPA) of 1979, and the National Environmental Policy Act (NEPA) of 1969. In 1977, the Society for American Archaeology published the Arlie House Report on the management of archaeological resources (McGimsey and Davis, 1977), and in 1983, the Secretary of the Interior issued Standards and Guidelines for Archeology and Historic Preservation. The growth of CRM also stimulated archaeologists to establish the Society of Professional Archaeologists (SOPA) and a statement of professional ethics in 1974 (see Beaudry, this volume).

One of the defining debates for historical archaeology during the 1960s raged as its practitioners struggled to define their work and create a separate profession. Would that profession be historical or anthropological? Charles Orser (1996) believes that that whole debate may have retarded the theoretical growth of the field because it was seen as the only important theoretical issue facing the discipline. Indeed, in Robert Schuyler's (1978) compendium on theoretical and substantive contributions of the field, the explicitly theoretical contributions are largely confined to this debate.

It is true that the founding of the Society for Historical Archaeology (SHA) in 1967 "gave academic legitimacy to the field of historical archaeology" (Cleland, 1993:3). But it is also true that "shopworn distinctions between the sciences and humanities and between peoples with history and those who lacked history" were reaffirmed with the formation of the SHA (Patterson, 1995:117). Trigger (1989:302) also bemoans the "invidious dichotomy between history and science [that] ... paralleled the distinction that American anthropologists drew between history and evolution." The science worship of the new archaeology reveled in a contempt for history. "Real scientists" were after objective, ethically neutral generalizations that were useful and relevant in solving modern problems. Trigger (1989:325) argues that many interpretations of the new archaeology look like rationalizations for American and British laissez-faire idealism through high-level theoretical justification. He elaborates, "Marxists could argue that neo-evolutionism's denial of a creative role for human beings reflect the dehumanizing effects of the growth of corporate capitalism, which effectively has destroyed the concept of an economic system built upon individual initiative that was the ideal of the middle classes in the nineteenth century" (Trigger, 1989:327).

The American awareness of pluralism influenced the topics taken up by historical archaeologists.

Much of the research through the 1970s was focused on subcultures of American society. Historical archaeologists embraced ethnicity as a subject to which the discipline could make real contributions in anthropology (see Patterson, 1995:134–135). African American archaeology got its start with Charles Fairbanks's (1974) search for Africanisms at Florida slave cabins. Deagan (1983:3–4) writes of the important focus on disempowered groups: "Excavations at colonial and postcolonial sites have led Schuyler (1976:35) and James Deetz (1977[a]:135) to suggest instead that the formation of American society was a process of systematic exclusion of non-Anglo groups from the mainstream of American life. This also suggests that the essential denial of any non-Anglo influence in our heritage—reflected today in its exclusion from traditional depictions of colonial history—is not just a contemporary phenomenon."

After the debate about historical archaeology's "crisis of identity" as history or anthropology during the 1960s was resolved largely in favor of anthropology, some energy was devoted to addressing theoretical concerns within that "parent" discipline. Major theoretical directions were set out in three 1977 publications. Stanley South (1977a) proposed the quantification and explicitly "scientific" approach of pattern recognition. James Deetz (1974, 1977a) interpreted historical processes of culture change in the English colonies from a structuralist viewpoint. The contributors to Leland Ferguson's (1977) edited volume covered both these major approaches. In that volume, Mark Leone (1977) strengthened the symbolic approach he introduced in his analysis of Mormon fences (Leone, 1972). The structuralist and symbolic approaches were very different from that of South, and eventually historical archaeologists were echoing the vituperative debates between the cultural ecologists and the symbolic anthropologists. Historical archaeologists continued to play a role in bolstering national identity and national myth as it had earlier with excavations at places like Jamestown (e.g., Schuyler, 1976).

In 1960, John Cotter taught the first academic course in historical archaeology at the University of Pennsylvania, and the field has grown rapidly since (Roberts, 1999). The volume of historical archaeology done in the United States increased dramatically with the legislated needs of CRM. The sheer volume of projects driven by the requirements of the NHPA to evaluate sites in terms of their proven or potential information value (Criterion d of the National Register of Historic Places eligibility criteria) has stimulated the field to define important questions of historic period sites that can be addressed fully only by incorporating archaeology. There would be far fewer archaeologists and far less archaeology done without the organizing structure of CRM.

The 1980s and 1990s

"Social history, once the great hope of an increasingly inclusive and yet scientifically minded profession, seemed inadequate to the task of offering a new, gendered, and inclusive narrative" (Appleby et al., 1995:217). Some historians turned away from social history to culture history and enthusiastically adopted anthropological concepts, especially of the mind, value systems, and specific cultural contexts. Cultural historians turned to anthropology and literary theory rather than sociology and economics as had the modernization theorists and Annalists. Public history remained strong (e.g., Chappell, 1989; Frisch, 1990; Linenthal and Engelhardt, 1996; Nash et al., 1998).

During the 1970s and 1980s, the anthropologist most cited by historians was Clifford Geertz (e.g., Darnton, 1984). Culture as context rather than as explanation was especially popular after the mid-1970s. The goal, as in Geertz's anthropology, was to decode meaning, not to infer laws or explanation. Marxists paid attention to culture through Gramsci's idea of hegemony (Gramsci and Hoare, 1973). The Annalistes also turned toward cultural history. Mentalité came to be seen as a primary determinant, as all practices were seen to rely on cultural representations.

Historians did not take very long to become wary of the culture concept. Historian Patricia Limerick (1997:197) writes, "Since the 1970s, the idea of culture has become a powerful lens for scrutinizing society, equally effective at helping and, as has become clear recently, hindering our understanding of human thought and action." By the end of the 1980s, historians had so reified culture that it was

less a tool for understanding than a "concrete material object" that served to bring inquiry to a halt. Limerick (1997:197) describes how culture becomes a sort of consolation prize for groups who are on the losing end of power and economic oppression:

> In many recent studies, scholars have adopted an approach that comes close to being a formula: Study a particular group and highlight the ways in which that group—be it an ethnic group, a group of women, a group of workers—has determined its own cultural destiny. Note and celebrate a series of cultural successes by the group, the ways in which its members have managed—despite the constraints imposed upon them—to maintain or redefine their family structures, religious practices, processes of self-governance, forms of expression, and personal identities.... By focusing on the culture of those who have been overpowered in history, we have allowed those who sought and exercised coercive power to avoid responsibility for their actions.

By the 1980s, the very concept of culture was under attack in sociocultural anthropology. Anthropologists were busy discarding traditional ethnographic methods and concepts (e.g., Clifford, 1988; Clifford and Marcus, 1986; Marcus 1999). Wolf (1980:E9) writes:

> An earlier anthropology had achieved unity under the aegis of the culture concept.... The relatively inchoate concept of "culture" was attacked from several theoretical directions. As the social sciences transformed themselves into "behavioral" sciences, explanations for behavior were no longer traced to culture: behavior was to be understood in terms of psychological encounters, strategies of economic choice, strivings for payoffs in games of power. Culture, once extended to all acts and ideas employed in social life, was now relegated to the margins as "world view" or "values."

As anthropologists were questioning "culture," however, they were embracing history. Eric Wolf (1982) turned anthropologists' attention to the modern world system, capitalism, history, and the variable political uses of history. Others, including Marshall Sahlins (1985) and Greg Dening (1988), made major contributions to historical anthropology.

Postmodernism gained influence as literary theory became widely influential among social sciences in the 1980s and 1990s. Although Joan Wallach Scott (1988) praised postmodern theory for relativizing all knowledge, some feminist anthropologists have been very critical of postmodernism. "In the postmodern period, theorists 'stave off' their anxieties by questioning the basis of the truths that they are losing the privilege to define" (Mascia-Lees et al., 1989:14). In short, as women and non-western people claimed their own voices, the west reacted with the truth claim that there is no truth.

Feminist anthropologists (Mascia-Lees et al., 1989:14) are critical of Clifford and others for pretending to invent something that feminists have been doing:

> However, what appears to be new and exciting insights to those new postmodern anthropologists—that culture is composed of seriously contested codes of meaning, that language and politics are inseparable, and that constructing the "other" entails rich relations of domination—are insights that have received repeated and rich exploration in feminist theory for the past 40 years. Discussion of the female as the "other" was the starting point of contemporary feminist thought.

Political awareness of one's own situation and its effect on one's scholarship reemerged in the 1980s and 1990s, although that seed had been planted at least in the 1960s. We can also recognize objectivism as a legacy of the eighteenth-century creation of absolute, scientific authority.

The cross-disciplinary intellectual movements of the 1980s saw the widespread impact of theorists like Anthony Giddens, Michel Foucault, Paul Ricoeur, Jean-Francois Lyotard, Baudrillard, Jacques Derrida, Jurgen Habermas, Pierre Bourdieu, and others. In the early 1980s, symbolic and structuralist attacks on the new archaeology came from both American (Leone, 1982) and British (Hodder, 1982a, 1982b) archaeologists and continued to grow and gain influence in both prehistoric and historical archaeology.

Interest in practice and agency began to grow in the 1980s in anthropology, linguistics, sociology, history, and literary studies (Ortner, 1984:145; for example, see Dobres, 2000; Dobres and Robb, 2000; Johnson, 1989). Practice theory, drawn from the work of Bourdieu and Giddens, was intended to explain the relationship between humans' actions and the systems in which they act. Bourdieu's idea of habitus is very much like the American view of culture (Ortner, 1984), but some scholars consider it to be less vague and more rigorous (e.g., McKay, 1982). Historian Ian McKay (1982) warned historians that "culture" was a vague and misleading concept and advocated instead adopting Bourdieu's ideas.

Within archaeology, agency or practice theories developed from critiques of the ecosystem models focus on social power, ideology, and gender. Dean Saitta (1994) offers a Marxist critique to refine agency theories within archaeology to look more carefully at power, especially at the surplus labor process. Brumfiel (1992:553) offers an agency-centered alternative to ecosystem models: "Rather than regarding prehistory as a long-term, systemic-level process of adaptation to environmental change, it may be better to see prehistory as a string of short-term, composite outcomes of social conflict and compromise among people with different problems and possibilities by virtue of their alliance in differing alliance networks." Timothy Pauketat (2001:75) identifies three main explanatory approaches adopted by archaeologists in the 1990s: neo-Darwinism, cognitive processualism, and agency theory. He analyzes their shortcomings, including functionalism and essentialism, and is particularly wary of "behavior" as "antithetical ... to an archaeology of historical processes." Pauketat advocates and illustrates a practice he calls "historical processualism" as an emerging paradigm that takes both historical process and practice seriously.

During the 1980s and 1990s, the topics addressed by historical archaeologists increased dramatically to embrace urban settings, symbolic analysis and meaning, inequality, race, class, gender, occupational categories, landscape, households, farmsteads, industry, capitalism, consumer choice, burials, the American Civil War, battlefields, global issues, and the political and social responsibilities of archaeologists. All of these along with methodological developments and continued interest in the frontier, racial and ethnic groups, plantations, and the contact period are topics to which historical archaeology contributes.

Theoretical developments in historical archaeology during this time were extensive, particularly under the umbrellas of postprocessualism, contextual archaeology, and critical theory (e.g., Beaudry, 1996; Leone, 1986; Leone and Potter, 1988; Leone et al., 1987; Shackel and Little, 1992; Yentsch and Beaudry, 1992). Several researchers suggested using the concepts of Giddens and Bourdieu to structure analysis of material culture and the broad context of its use (e.g., contributors to Little and Shackel, 1992; Driscoll, 1988; Johnson, 1989). Orser (1996:29–55) suggests that analyzing society and its networks gets us much farther than the foggy idea of culture. As historical archaeology took on the demands of the social sciences, all of our theoretical and methodological baggage began to be reassessed. Mary Beaudry (1996:474) offered structuralism-inspired contextual approaches as a "counter-paradigm" to cultural ecology as a key to a reinvented historical archaeology that has been there "all along."

In evaluating the strengths of the discipline, it is fair to give the full range of theory and methods its due. Cultural ecology, for example, has taught us a great deal about the external constraints upon societies. In what could be described as a classic rite of passage, postprocessualism forced overstated processual assumptions and biases into a liminal state, where transformation occurred. At the end of the 1990s, it became possible to welcome back a transformed scientific approach that takes both ambiguity and the possibility of knowledge seriously (Pauketat, 2001; VanPool and VanPool, 1999).

In 1987, the plenary session topic at the annual SHA meetings was "Questions that Count in Historical Archaeology." The opinions expressed there emphasized that the discipline needed to do some serious reexamination of its methods and theories and the means for connecting the two. Practitioners criticized the discipline for being routinized and atheoretical (e.g., Honerkamp, 1988) and yet understood that it has great potential. Since that stock taking, and especially in the 1990s, historical archaeologists have begun to offer sophisticated critiques of their discipline's theory and position in the social sciences. Self-critique and self-assessment (Beaudry, 1996; De Cunzo, 1996; Noble, 1996) signaled a healthy discipline. There was also critical reflection from outside the discipline (e.g., Williams, 1992; Upton, 1996; Wylie, 1992, 1993).

Appleby et al. (1995:303) write of historians becoming a little gun-shy of the big issues: "contemporary historians have retreated to smaller questions—not why capitalism triumphed in the West, but what happened to displaced weavers when mechanization came to Gloucestershire. Late-twentieth-century historians find a uniqueness in the complexity of events which mocks the earlier mimicry of the scientific model of uniform truths." Historical archaeologists at the same time were

looking outward toward global issues to look at the development of the modern world (Deetz, 1991; Falk, 1991; Orser, 1996). Orser (1996) proposes a research program for historical archaeology to look at social relationships at many scales, to look at particular places and all places in a global approach.

Beginning in the 1980s, archaeologists took a serious interest in public outreach and education. Arizona held the first Archaeology Week celebration in 1983, and by the mid-1990s, a large majority of states celebrated Archaeology Week or Archaeology Month. Leone and his colleagues (Leone, 1983; Leone et al., 1987; Potter, 1994) started the public program in Annapolis, Maryland, to apply critical theory to public outreach. Other historical archaeologists also established strong public programs and have sustained the benefits to their communities, such as Alexandria, Virginia (e.g., Cressey, 1987).

Archaeologists also turned their attention to professional well-being. CRM firms established the American Cultural Resources Association (ACRA) in 1995. In 1998, the Register of Professional Archaeologists (RPA) replaced SOPA as the professions' organization for the enforcement of ethical behavior. The major professional organizations—Society for American Archaeology, Society for Historical Archaeology, the Archaeological Institute of America, and the American Anthropological Association—are all sponsors of RPA (see Beaudry, this volume).

Public laws and historic preservation continued to affect historical archaeology. In 1988, the U.S. Congress passed the Abandoned Shipwreck Act, for which the NPS issued guidelines in 1990. The 1988 amendments to ARPA (Section 10[c]) not only strengthened law enforcement but also added the requirement for federal land-managing agencies to educate the public about archaeology. The U.S. Forest Services' Passport in Time program, which provides public outreach through volunteer opportunities, started shortly thereafter in 1991 and continues to thrive. The federal government further expressed an interest in archaeology by issuing regulations on the "Curation of Federally-Owned and Administered Archeological Collections" (36CFR79).

In 1990, Congress passed the Native American Graves Protection and Repatriation Act (NAGPRA), which directly affects archaeologists working with Precontact sites more so than historical archaeologists (e.g., Thomas, 2000). In 1992, NHPA amendments further contributed to the trend toward inclusion by requiring consultation with Indian tribes and Native Hawaiian organizations and allowing tribal preservation programs to take on the same responsibilities as State Historic Preservation Offices (SHPO). The same set of amendments created a presidential appointment for a Native American or Native Hawaiian to the ACHP. The effects of NAGPRA on the way that archaeology is carried out have been wide-ranging and deep, affecting fieldwork, research design, collections, and the dissemination of results. Archaeologists have become thoroughly engaged with descendant communities, many of which have their own archaeology programs on reservation lands (e.g., Dongoske et al., 2000; Swidler et al., 1997; Watkins, 2001).

Historical archaeology received its own version of the impact of NAGPRA and the NHPA amendments with the discovery of the African Burial Ground in lower Manhattan in 1991. The public outcry and ongoing public involvement have changed the standard operating procedure for such projects. The researchers took great care to consider the meaning of the work to the descendant community. Cheryl LaRoche and Michael Blakey (1997:99) summarize the public engagement of the project: "As the situation in New York evolved, the African Burial Ground became apparent as a practical and dramatic case for the development of the theory and practice of inclusion and engagement. In the case of the African Burial Ground, engagement was also powerfully informed by the long tradition of African American vindicationist critique." The term "vindicationist" comes from a long tradition of African American scholarship that counters racism and racial denigration with a combination of academic work and social activism.

The New Century

The African Burial Ground project offers a good segue to consider historical archaeology in the new century because it helps to focus the discipline on

scholarship in the public interest. It is too early in the new century to have gained the necessary perspective for a clear or comprehensive view of the interrelationships and connections among anthropology, archaeology, history, historic preservation, and historical archaeology. One trend that appears clear throughout archaeology is that toward public benefit, including education and outreach, community archaeology, civic engagement, all under an umbrella of applied anthropology (Bender and Smith, 2000; De Cunzo and Jameson, 2005; Derry and Malloy, 2003; Green, 2000; Jameson, 1997, 2004; Little, 2002; Marshall, 2002; McDavid, 1997; Rowan and Baram, 2004; Shackel, 2000, 2001, 2003; Smardz and Smith, 2000). Both historians and archaeologists have taken polls of the American public's ideas about the past, as both disciplines strive to make their work more widely relevant (Ramos and Duganne, 2000; Rosenzweig and Thelen, 1998).

The term "public archaeology" once meant archaeology done to comply with legal and regulatory requirements. It now includes much more: not only archaeologists going public to share knowledge, but also collaboration with and within communities and activities in support of civic engagement and civic renewal (e.g., Little and Shackel, 2007). Every sector of the archaeological profession considers public education and outreach to be important. Private contract firms of all sizes incorporate elements of public outreach into at least some projects. Public outreach is integral to the work of many private foundations and institutions. Some academic institutions are engaged in outreach efforts connected to civic engagement and service learning. Federal, tribal, state, and local governments are concerned with the public benefit of the work they require or sponsor. The ACHP has turned its attention to the promotion of heritage tourism and local economic impact of historic preservation with the Preserve America initiative, which began in 2003. The first archaeologist to be a member of the council itself is a historical archaeologist, appointed in 2003.

For trends and forecasts in theory, method, and public policy, we have the insightful contributions to three forum discussions in the journal *Historical Archaeology* (Cleland, 2001; Hardesty, 1999; Lees and King, 2007). In "Historical Archaeology in the Next Millenium: A Forum," Donald Hardesty (1999) asks where historical archaeology is going as a profession. He acknowledges that the field needs to assess its organization and practice, particularly with regard to the relationship between CRM and academic archaeologists. However, his primary issue concerns the field's research agendas. He proposes four interdisciplinary research domains for investigating the development of the modern world. Each would fully integrate history and anthropology as well as other disciplines. These are environmental change, the evolution of technology, ethnogenesis and other new social formations, and something he calls "others knowing others," which concerns contact between people and cultures.

In his forum, "Historical Archaeology Adrift?," Charles Cleland (2001) focuses on methods and proposes a specific way to work with archaeological and documentary data. In doing so, Cleland contrasts the particulars of history with cultural process. He is concerned with getting at larger anthropological issues, writing that: "We have been so concerned with historical particulars that we have lost sight of our ability to use historical archaeology to address the larger cultural questions so worthy of our attention. . . . With few exceptions we have not met this challenge" (Cleland, 2001:2). In a response that highlights an ongoing dialogue within historical archaeology about its parent disciplines, Lu Ann De Cunzo (2001:17) answers, "It is not the separation and stratification of individual event and cultural principle that will serve us. To put it much more simply than postmodern social theorists have, we must integrate them into a dynamic theory of culture that explains continuity (pattern) and change (process) in terms of each other and of human agency."

William Lees and Julia King (2007) take on the public policy side of historical archaeology in a forum provocatively entitled, "What are we really learning through publicly funded historical archaeology and is it worth the considerable expense?" They are concerned with historical archaeology's apparent inability to justify itself as worthwhile to historians. In my response (Little, 2007b:77), I argue for a broad societal relevance and urge historical archaeologists, particularly those working in CRM, to define our purpose as public scholarship that crosses boundaries:

> We might then learn from and have a contribution to make to Public History rather than History and Applied Anthropology rather than Anthropology. There is no need to reinvent the fact of public scholarship, but there is need to adapt it, particularly due to the business aspect and the need for profitability in public archeology. . . . scholarship no longer resides solely in the academy, but also in "think tanks," many businesses and corporations, not-for-profit organizations, government agencies, and other entities.

As historical archaeologists frame their work as applied anthropology (e.g., Shackel and Chambers, 2004), they are in step with a large sector of cultural anthropology. Anthropologist Laura Nader (2001:609) celebrates the transformation of anthropology at the turn of the millennium and calls this a time for "new syntheses and renewed civic engagement." Nader has confidence in the discipline's ability to thrive and make real contributions in the modern world (see also, Eriksen, 2005; Smith, 1999). It is a confidence shared by historical archaeologists. Divisions, of course, remain as fragmentation signals the continuation of deep divides that have haunted the social sciences since their inception. Anthropologist Eric Smith (2006:10) writes about an epistemological divide in anthropology between "anthropological science (whether natural or social) and non-science (humanities or even anti-science)" and says that he does not see "any easy way of facilitating understanding across epistemological boundaries." He refers to a new organization called the Society for Anthropological Sciences, formed by cultural anthropologists who felt marginalized within the American Anthropological Association. Unfortunately the schism between the humanities and the sciences remains with us, but so are many of the issues confronted through the twentieth century.

History and anthropology have had an on-again–off-again relationship. Each has influenced historical archaeology. Each of these parent disciplines also benefits from historical archaeology. History benefits not only from the supplementary evidence of historical archaeology but also from challenges to accepted historical interpretation that arise from examining dissimilar evidence from different viewpoints. Historic preservation, considered here as related to both history and archaeology, benefits from the accuracy and authenticity provided by historical archaeology as well as by the public's general interest in archaeology. Both anthropology and history benefit from detailed interpretations of historical-period societies known through the intimate details of the archaeological remains. Anthropology also benefits by the necessarily interdisciplinary and holistic nature of historical archaeology and, currently, determined efforts by historical archaeologists to apply their work for community benefit. Archaeology as a whole benefits from any methodological advances involving the interpretation of material culture. In addition, it has benefited from theoretical developments in the subdiscipline, as historical archaeologists helped to lead the way in breaking out of the determinist constraints of processual archaeology.

As historical archaeology continues to develop and pursue its pursuit of global, interdisciplinary, and public scholarship, it will continue to be influenced by cultural anthropology, archaeology, applied anthropology, history, public history, and the public realm of historic preservation. Increasingly, if we are intentional about the impact of our practice, historical archaeology will in turn influence those disciplines and practices as well.

Postscript

This chapter is a brief overview of the interrelationships among historical archaeology, history, and anthropology. Neither the text nor the citations are exhaustive in any way. Those interested in the development of archaeology should read Bruce Trigger's *A History of Archaeological Thought* (2006). Because I drafted the bulk of this overview in the late 1990s when this handbook was first proposed, I cite Trigger's 1989 volume extensively and have not gone through the expanded second edition for new citations. Those interested in the development of the disciplines should also read Tom Patterson's books (1995, 1999, 2003a, 2003b), Alice Kehoe (1998), every issue of the *Annual Review of Anthropology*, historiography from a variety of perspectives, including Peter Novick (1988) and Georg Iggers (1997), as well as Appleby et al. (1995), and history of archaeology and anthropology, a specialty in itself that has grown quite large over the past decades. Also see biographies of historical archaeology's founders, including

Dan Robert's (1999) interview with John Cotter to get a perspective on his 60-year career as a historical archaeologist. Those looking for a quick overview of public archaeology should consult the NPS's *Public Archaeology in the United States – A Timeline* at http://www.nps.gov/archeology/timeline/timeline.htm. I would like to acknowledge several colleagues for review and comments on this manuscript: Laura Feller, Marie Tyler McGraw, Teresita Majewski, Teresa Moyer, Dwight Pitcaithley, and Paul Shackel. Errors in interpretation are mine alone. I published a shorter and somewhat differently focused version of this chapter as Little (2007a).

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The Archaeology of La Florida

Charles R. Ewen

Introduction

The Spanish exploration and exploitation of the southeastern United States, what the Spaniards called La Florida (Fig. 1), has long been the subject of historical and archaeological research. The de Soto *entrada* was the first European exploration of this region and has intrigued scholars for scores of years. St. Augustine was the first permanent European settlement, and archaeological work there has been ongoing for over half a century. Yet, archaeological research on Spanish sites lagged significantly behind that of their British counterparts during most of the twentieth century. This was especially apparent during the years leading up to the American Bicentennial celebration. However, this trend had reversed by the end of the century, and if there is presently less research on Hispanic sites it is only because there are fewer of them.

The focus of Spanish colonial archaeology has evolved over the years from a search for early Contact period sites to the recreation of past Hispanic lifeways, the delineation of colonial patterns, and a study of the impact of Spanish colonization on indigenous peoples. The evolution of these interests is reflected in the archaeological investigations at such sites as Santa Elena (South Carolina) and St. Augustine (Florida), Colonial Pensacola, the missions of north Florida, and into the interior of the North American continent (Fig. 2). The Columbian Quincentennial in 1992, an event expected to take this research to a higher level, actually proved more of a distraction than boon to Spanish colonial archaeology. Celebrations of Columbus's discovery of America were often embroiled in controversy, with the adverse impact of this contact on the native inhabitants of the New World capturing the spotlight. However, out of this controversy, scholarly attention has come to focus on such subjects as creolization and a reassessment of the impact of European diseases and technology on the peoples of the New World.

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Trends in Research

Spanish colonial archaeology before the Quincentennial loosely followed the general developmental trend in American archaeology. This began with a culture-history paradigm that had a particularistic focus on artifact description and the construction of spatial and temporal frameworks. The collection of these baseline data was initially undertaken by such individuals as John Goggin, Hale Smith, John Griffin, and Charles Fairbanks. Their field investigations, done on a shoestring budget and often with minimally trained crews, would scarcely be contemplated by modern archaeologists. Yet, the work of these individuals established basic typologies and chronologies for the olive jar (Goggin, 1960), majolica (Goggin, 1968), and beads (Fairbanks, 1968), and identified many of the key Spanish colonial sites in the southeastern United States (e.g., Boyd et al., 1951; Caldwell, 1953; Larson, 1953; H. Smith, 1948, 1956). The artifact typologies of these early pioneers, though later refined by George Avery (1997), Kathleen Deagan (1987, 2002), Stephen James (1988), Robert and Florence Lister (1974,

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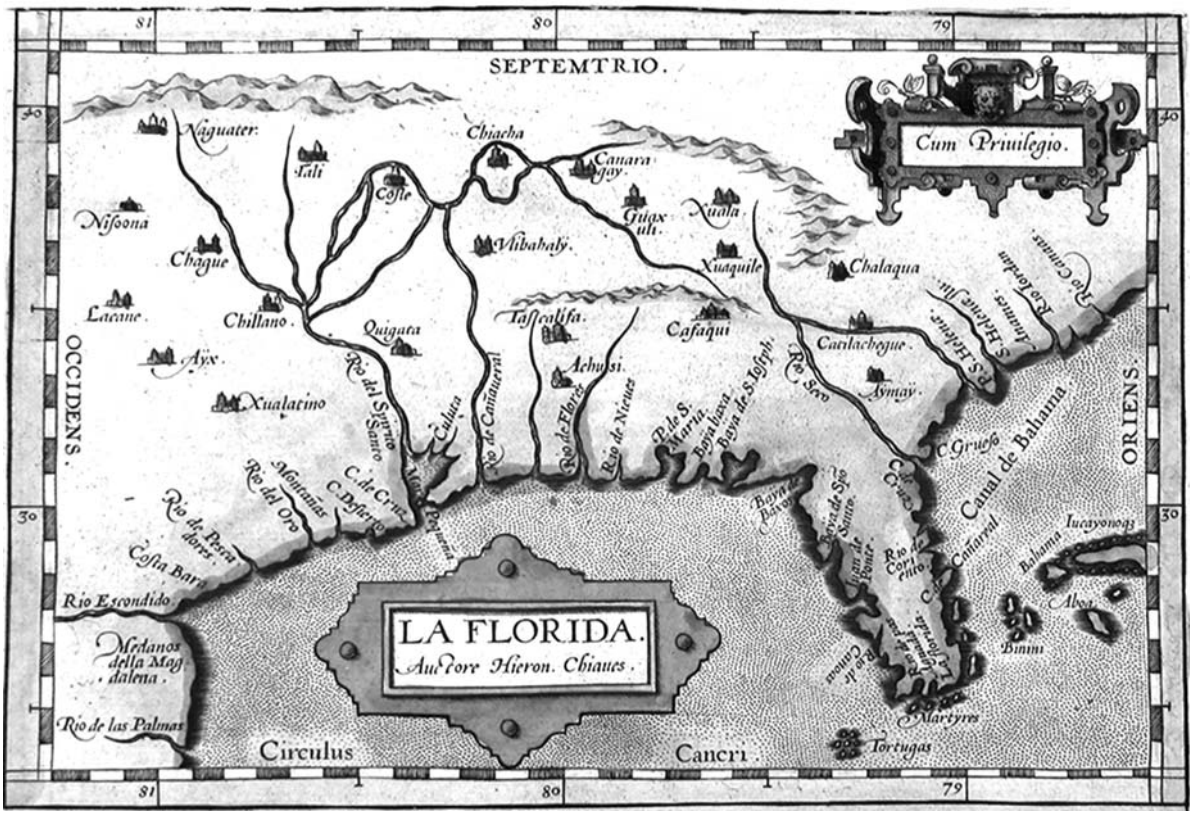

Fig. 1 The sixteenth-century Jeronimo de Chavez map of La Florida from *Theatrum Orbis Terrarum* by Abraham Ortelius (1570)

1987), Marvin Smith (1983; Smith and Good, 1982), and Stanley South (South et al., 1988) have generally stood the test of time.

The "New Archaeology" of the late 1960s and early 1970s ushered in a scientifically oriented approach emphasizing hypothesis testing and pattern recognition. During this period, hypotheses concerning the spatial organization of mission sites were developed (Jones and Shapiro, 1990), and models of acculturation were proposed (Deagan, 1974). Stanley South's functional artifact categories and pattern recognition approach, exemplified in his *Method and Theory in Historical Archeology* (1977), influenced a generation of Spanish colonial scholars. Beginning in the 1980s, a more humanistic, postprocessual approach came to the fore, and brought with it an emphasis on topics such as gender roles, ethnicity, and power dynamics. An emic perspective was adopted, and the consequences of Spanish contact with the indigenous peoples of La Florida emerged as an important area of research (e.g., Deagan, 1985b, 1990a, 1990b; Dobyns, 1983; Ramenofsky, 1987; M. Smith, 1987). This trend continues to the present, although the cultural-historical and processual paradigms have not been abandoned.

Ewen's (1990) *The Archaeology of Spanish Colonialism in the Southeastern United States and the Caribbean* was a guide to the literature on Spanish colonial archaeology that organized the subject matter by topical areas rather than chronology. The guide identified several thematic foci in Spanish colonial archaeology that have and continue to concern archaeologists: (1) the Contact period, (2) missions, (3) settlements and architecture, (4) material culture studies, (5) shipwrecks and maritime sites, and (6) ethnicity and acculturation. This approach groups the material in a useful fashion, despite the fact that there is considerable overlap.

Fig. 2 Locations of major sites discussed in the text

By the eve of the Quincentennial, enough work had been completed in many of these topical areas to allow the compilation of synthetic works on Spanish colonial archaeology (e.g., Milanich and Milbrath, 1989; Thomas, 1990). Major field programs such as that at Pensacola, Florida (Bense, 1999, 2003) and at several mission and settlement sites in Florida (McEwan, 1993), Georgia (Thomas, 1993), and South Carolina (South, 1991) figured prominently in the hoopla surrounding the 500th anniversary of the "Columbian Voyage of Discovery." The Quincentennial was expected to jump start many additional long-term Spanish colonial period projects.

The anticipated popular/scholarly jubilee and celebration of Columbus's accomplishments essentially fizzled, as public interest in the Quincentennial never reached anticipated levels. There were a couple of poorly received movies, a mildly successful PBS (American public television) series, and an uneven collection of books focusing on the life of Columbus. America's exhibit at Expo '92 in Madrid was so politically correct as to almost insult their Spanish hosts (Skowronek, 1995). All of this made little perceivable impression on the American psyche. The celebrations that did succeed, such as the Smithsonian's *Seeds of Change* traveling exhibit (Viola and Margolis, 1992), focused less on Spain's colonial efforts in America and more on the consequences of contact.

Some archaeologists shrugged off the public apathy concerning their work, noting that the events

being commemorated by the Quincentennial had been touted as a genocidal travesty by their cultural anthropologist colleagues (Ewen and Hann, 1998:215). In retrospect, the lack of attention given to the Quincentennial should have been expected. For all of the emphasis on America as a "melting pot," the nation's overt heritage is still largely rooted in an English tradition. The celebrations surrounding the American Bicentennial were much more favorably received by the press. That said, Spanish colonial archaeology *did* benefit from the Quincentennial, and scholarly interest *was* raised. Many of these efforts were recounted in the Organization of American States' newsletter *Quincentennial of the Discovery of America: Encounter of Two Worlds* (OAS, 1992).

Fieldwork starting before and continuing through the Quincentennial was, on the whole, successful. Multiyear projects such as those at St. Augustine (Florida), Santa Elena (South Carolina), San Luis (Florida), and other Spanish settlements continue to yield insights into the Spanish colonial past. The excavation of the Emanual Point wreck in Pensacola, Florida (possibly one of Tristan de Luna's ships from his ill-fated attempt to settle the Florida panhandle) combined investigations both on land and under the sea (R. Smith, 1995, 1998). Thus, in a very real sense, scholarly endeavors benefited from increased funding during the Quincentennial, even if the accompanying popular celebrations were disappointing.

It is difficult at this point to fully assess the state of post-Quincentennial research; however, it appears that archaeologists have gone back to many of their pre-"celebration" concerns. If the Quincentennial did nothing else, it provided a thematic integration, albeit temporary, for Spanish colonial research. Unfortunately, after the "jubilee" many archaeologists returned to research questions that were site specific or, at most, regional in scope. This fragmentation appears to be an unfortunate aspect of the post-Quincentennial research world. Many of the research connections made during the years leading up to the Quincentennial were ephemeral and perhaps constructed for self-serving (i.e., grant-generating) reasons. For a short time, however, these connections allowed Spanish colonial research to move beyond such questions as "did de Soto sleep here?" and seek some more anthropologically oriented integrating themes.

During the early years of the twenty-first century, the archaeologists of La Florida continued their long-term work and investigated some new research questions that had emerged from that work. They continued using the data from past and current programs to ask, and perhaps answer, larger questions concerning the role and impact of Spanish interests in the New World (Dawdy, 2000; Deagan, 2003; Moore et al., 2004). The new millennium also saw an explicit recognition of the need to inform the general public of what archaeologists were doing. The mission site of San Luis de Talimali in Tallahassee, Florida, is an excellent example. The State of Florida and multiple essential partners, including the National Endowment for the Humanities, the University of Florida, Florida Department of Education, the City of Tallahassee, Leon County, Florida, and others, received a 2006 *Preserve America* Presidential Award in the Heritage Tourism Category for the reconstruction of the church, fort, Apalachee council house, and chief's house and associated interpretive materials.

Themes in Spanish Colonial Archaeology

Most current Spanish colonial archaeologists, with a few notable exceptions, trace their academic roots back to Charles Fairbanks and the University of Florida. Other universities, such as Florida State University and the University of Georgia, have long histories of Spanish colonial research. However, in these cases either many of their current faculty members were trained at the University of Florida, or their interest in Spanish colonialism is peripheral to their study of indigenous peoples. For the most part, these researchers have followed a scientifically oriented, processual approach to Spanish Colonial studies in La Florida. However, as the postprocessual trend in archaeology came to dominate the general archaeological literature, it also made inroads into Spanish colonial research, most noticeably in the concern for gender and ethnicity. Structuralist and Marxist approaches have not been used to any great extent as yet, though their utility has been noted (Deagan, 1988).

The approaches used in Spanish colonial archaeology, as the previous section has shown, have evolved in step with the concerns of historical archaeology in general. However, the actual subjects under investigation have remained remarkably constant through time. This probably holds true for other specialties within the discipline, and reflects, in large part, the training of the scholars engaged in the research.

Material Culture Studies

The archaeological research conducted on Spanish colonial sites in the southeastern United States has benefited from artifact studies conducted on Spanish sites elsewhere in the New World (e.g., Brinkerhoff and Chamberlain, 1972; Craig, 2000; Frothingham, 1941; Lister and Lister, 1987; Nesmith, 1955) and in Spain, itself (McEwan, 1988). However, Southeastern archaeologists have also contributed to such studies. Here, archaeology's concern for a tightly dated, culturally meaningful, and functionally well-understood artifact database is well reflected in the descriptive and classificatory schemes developed in the area. Although there are literally scores of individual artifact studies from the Southeast and Caribbean, the collected definitions and descriptions of many of these artifact types is compiled in Deagan's (1987, 2002) two-volume set *Artifacts of the Spanish Colonies of Florida and the Caribbean, 1500–1800*, and South et al.'s (1988) *Spanish Artifacts from Santa Elena*. The latter is especially useful in that it covers many artifact categories not described elsewhere.

Shipwreck sites can be especially useful in artifact studies, because they represent single deposition events and hence have tighter chronological control than most terrestrial sites. As such, these *de facto* refuse sites not only give us a "moment in time" synchronic glimpse of Spanish shipboard life, but also provide information on the types of materials being shipped to La Florida. As with terrestrial sites, there are numerous site reports that provide catalogs of artifacts recovered. Two works describing shipwrecks off the Texas Gulf coast (Arnold and Weddle, 1978; Olds, 1976) focus on the artifacts and are useful references. A recent volume by Mitchell Marken (1994), *Pottery from Spanish Shipwrecks, 1500–1800,* examines the ceramic assemblage from wrecks recovered by treasure salvager Mel Fisher. Other studies examine shipwrecks for what they can tell us about shipping and trade patterns, both legal and illegal (Scott-Ireton, 1998; Skowronek, 1984, 1992).

Ethnicity

The identification of particular ethnic groups in the archaeological record has been a staple of historical archaeology since its inception. Orser and Fagan (1995:209) go further and claim that "ethnicity was the first great sociological topic of historical archaeology." The term "ethnic group" has been variously defined and is being used here to mean a group that identifies itself and is identified by others as socially distinct. This topic has been of particular concern for Spanish colonial researchers who have moved beyond merely identifying Spaniards in the archaeological record and have tried to identify the formation of ethnic groups using Spanish material culture.

The identification of different groups and their relative status is important to archaeologists because it was important to the colonists themselves. In Spain, and later in her colonies, "the individual's status or prestige was of paramount importance notwithstanding the permanence of economic differences" (Morner, 1967:8). Spaniards born in the New World were referred to as *criollos* by those *peninsulares* born in Spain itself. This *criollo* class constituted a separate group that was considered distinct in the documentary record. The formation of this *criollo* class has been of particular concern to Spanish colonial archaeologists presaging a more widespread concern with the creolization process in historical archaeology in general (see Dawdy, 1998).

Kathy Deagan (1974) led the way with her groundbreaking study of *mestizaje* in the colonial port of St. Augustine, Florida. Out of this study came the formulation of the "Spanish Colonial Pattern." Deagan (1983:270) suggested that early colonists adapted to their new environment by incorporating indigenous elements into the colonists' low-visibility subsistence and technological

activities while at the same time maintaining Spanish affiliation in such socially visible activities and elements as clothing, tableware, personal ornamentation, and religious paraphernalia. That is to say, conservatism in those socially visible areas associated with male activities was coupled with Spanish–Indian acculturation in the less-visible, female-dominated areas. She further hypothesized that this pattern of behavior should be expected in any situation where a predominantly male group imposes itself on a group with a normal sex distribution. The "Spanish Colonial Pattern" held up under testing at Puerto Real, Haiti (Ewen, 1991), but has been challenged elsewhere (Van Buren, 1999; Williams, 1993).

Another aspect of the research into ethnicity in the Spanish colonial archaeological record concerns the interaction of the Spanish colonists with other groups such as African and Native American populations. The changes wrought upon the indigenous inhabitants of La Florida by the Spaniards are discussed in *Tacachale: Essays on the Indians of Florida and Southeastern Georgia during the Historic Period* (Milanich and Proctor, 1978) and more recently in *Florida Indians and the Invasion from Europe* (Milanich, 1995) and other publications (Deagan, 1990a; Marrinan, 1985; McEwan, 1991, 2001; Ruhl and Hoffman, 1997; Scarry and McEwan, 1995, M. Smith, 2000; Stojanowski, 2003; Vernon, 1988; Worth, 1998a, 1998b). Jane Landers (1990, 1997) has used the historical record to examine the roles of both enslaved and free blacks in the Spanish colonies, and excavations at Fort Mose, a free black community north of St. Augustine, add an archaeological perspective to this topic. The archaeology of this briefly occupied site is summarized in *Fort Mose: Colonial America's Black Fortress of Freedom* (Deagan and MacMahon, 1995).

Missions

Spanish missions are most commonly associated with California's colonial history, even though many of those missions postdate earlier missions in the southeastern part of the country. This is because many of the crumbling ruins of California's eighteenth-century mission structures were restored in the 1930s and remain iconic symbols of the romantic perception of that region's past. These restorations were often undertaken with little or no accompanying archaeology. Ironically, in La Florida, there has been significantly more archaeological research at mission sites, even though there were no standing ruins to inspire it. Only one of these sites, Mission San Luis de Talimali in Tallahassee, Florida, has been reconstructed (Shepard, 2003).

An early historical summary that inspired many archaeologists was Lanning's (1935) *The Spanish Missions of Georgia*. Hale Smith (1948) initiated mission research in Florida with *Results of an Archaeological Investigation of a Spanish Mission Site in Jefferson County, Florida*. He then collaborated with Mark Boyd and John Griffin (Boyd et al., 1951) to produce *Here They Once Stood: The Tragic End of the Apalachee Indians*, "a joint historical-archaeological attack on some of the problems of the Spanish mission era in the Apalachee region of Florida" (Boyd et al., 1951:vii). Other early works on this topic have been produced by Boyd (1939), Caldwell (1953, 1954), Fairbanks (n.d., 1957), Griffin (1960, 1965), Jones (1967), and Larson (1953). Most of these publications are descriptive site reports based on preliminary excavations.

The tempo of mission research has picked up since the 1970s (see Loucks, 1979) with well over 100 mission-related sites identified in the historical record (Hann, 1990), many of which have been located by archaeologists. Among the first of the mission site surveyors was B. Calvin Jones, an archaeologist with Florida's Bureau of Archaeological Research (see Jones and Shapiro [1990] for a summary of some of this work). Jones' work and hypotheses about mission layouts provided the foundation for several long-term projects in north Florida and the Georgia coast. McEwan's (1993) *The Spanish Missions of* La Florida and Milanich's (1999) *Laboring in the Fields of the Lord* are excellent volumes on mission archaeology. Examples of some of this research are discussed below.

The Spanish mission effort began with the Jesuits in St. Augustine in 1565. Their efforts were met with hostility, and they never spread far from their coastal base. Feeling that their efforts in La Florida were fruitless, the Jesuits abandoned the effort in

1572. The Order of Friars Minor (Franciscans) took up the mantle, and by the early seventeenth century had established a network of mission centers and satellite *visitas*. Based in St. Augustine, the mission chain was anchored in the west by San Luis de Talimali (Hann and McEwan, 1998). The Franciscans also operated a string of missions up the Atlantic coast. Two of these, both named Santa Catalina, have been investigated by archaeologists.

The indigenous peoples residing just north of the Timucuan-speaking Indians around St. Augustine were called the Guale Indians. Though it is uncertain exactly when the missionary effort reached the Guale, by 1587 the mission of Santa Catalina de Guale had been established near the principal native village on St. Catherine's Island. In 1981, after a 4-year search, David Hurst Thomas and a team from the American Museum of Natural History located the remains of this late-sixteenth- and early-seventeenth-century mission (Thomas, 1988).

Nearly 20 years of excavation at this site have done much to advance our knowledge of Spanish missions and the Spanish borderlands. The work in the plaza area of the Santa Catalina de Guale mission has uncovered the church, *convento*, and *cocina* (kitchen). The burials uncovered in the floor of the church have revealed information concerning mortuary practices among the christianized Indians, and the goods associated with these burials offer clues about the effects of contact on indigenous peoples (Thomas, 1993). Work has expanded beyond this "sacred precinct" in order to obtain more information pertinent to the local Guale population and their interaction with the Spanish missionaries. This has proven useful for comparison with other mission-contact situations.

After British-led Yamassee Indians destroyed the mission on St. Catherine's Island, the Guale population was relocated to nearby Sapelo Island. Fearing that this was still too dangerous, the mission was relocated to Amelia Island off the northeast coast of Florida in 1686. The mission never regained the stature it had enjoyed farther north, and was finally destroyed by Colonel James Moore in 1702 on his way to an unsuccessful siege of St. Augustine.

The general location of the site had been known since the 1950s, but no extensive investigations had been undertaken prior to 1985, when the landowners invited archaeologists to investigate the human remains they had uncovered during the construction of their new house (Saunders, 1988). Subsequent excavations uncovered the cemetery, *convento*, and several activity areas associated with the mission. Additionally, the church and associated burials from an earlier mission Santa Maria de Yamassee were encountered and recorded. "The amount of data recovered is enormous, and the diversity of that data, from site layout to human skeletal remains to material culture, will be invaluable for addressing questions about transculturation between the Spanish and the southeastern Indians" (Saunders, 1993:38). There is good communication between the mission archaeologists, allowing comparative data to be used to address these questions at other, contemporary sites.

San Luis de Talimali (8Le4) anchored the western end of the mission change in north Florida. It served as the military, religious, and administrative hub for the Spaniards in the Apalachee province during the seventeenth century. Burned and abandoned in 1704, the mission's location remained in the historical record and was investigated on an intermittent basis over the succeeding centuries. The state of Florida acquired the property in 1983 to use as an archaeological park after earlier archaeological work by John Griffin and Hale Smith indicated the research potential of the site (Boyd et al., 1951).

Initial work after the acquisition of the property consisted of the collection of baseline data by such methods as topographic mapping, a complete systematic auger survey of the property, remote sensing (resistivity and ground penetrating radar), and follow-up test excavations. By the end of the first year of investigation, the location of the plaza, council house, and blockhouse had been plotted with some certainty. Not only had the spatial layout been established, but a chronology of occupation beginning with the Middle Archaic and extending to the present had been worked out as well (Shapiro, 1987).

Subsequent work initiated by Gary Shapiro and continued by Bonnie McEwan has located the council house, the church (formerly suspected to be the cemetery), and the associated Spanish village. The original fort has also been completely excavated (McEwan and Poe, 1994). A great deal of work has been directed toward the burials in the church

(see Larsen, 1990; Mitchem, 1993), which has provided information about the mortuary behavior, status variation, and biocultural adaptation of the Christian Apalachee population. The work of Reitz (1993), Ruhl (1990), and Scarry (1993) has provided a picture of the dietary practices of the Spaniards and Indians during the mission period that has compared well with their previous work in St. Augustine (Reitz and Scarry, 1985; Scarry and Reitz, 1990).

Though most of the work has been at either end of the Spanish mission trail, investigations have also been conducted along that trail. Florida State University has conducted a long-term investigation of Mission Patale (Marrinan, 1993) located just east of Tallahassee, the mission at Fig Springs (located farther south) has undergone a thorough investigation as well (Deagan, 1972; Johnson, 1990; Weisman, 1988, 1992). Dozens of other mission sites have been identified and subjected to various degrees of excavation (e.g., San Juan de Aspalga [Morrell and Jones, 1970]).

The presidios that often accompanied the La Florida missions have also been the subject of study. The presidio system has been summarized by Childers (2004), and specific sites have been examined by Halbirt (2004) and Kurjack and Pearson (1975). On the extreme western frontier of La Florida was Los Adaes in Louisiana (Gregory et al., 2004), which like Pensacola (Bense and Wilson, 1999), was significantly influenced by the French.

Colonial Towns

The focal point of La Florida was its capital, St. Augustine. Founded in 1565, it served as an administrative hub and defensive bulwark for the nascent colony. It was the only settlement of this initial Spanish foray into La Florida to succeed. Indeed, it outlasted the colony itself, and it retains something of its Spanish character to this day. Scholars recognized the research potential of St. Augustine early on, and generations of Spanish colonial archaeologists can trace their roots to field schools conducted there by Charles Fairbanks and later, Kathleen Deagan.

The fact that there are no standing mission structures and few other buildings associated with the Spanish colonists in the Southeast is one of the reasons this heritage has been largely forgotten (see Thomas, 1988). The city *does* have the impressive the Castillo de San Marcos (Arana and Manucy, 1977); however, the less well-preserved fortifications of the city have also been investigated (Goggin, 1951; Halbirt, 1993a, 1993b; Lyon, 1997; Waters, 1997). Other kinds of structures in St. Augustine, Florida have also seen much archaeological research. Some of these studies focused explicitly on architecture (i.e., Gjessing et al., 1962; Manucy, 1978, 1983, 1985, 1997) or spatial patterning (Deagan, 1985a), while others focused on the activities of the building's inhabitants (Chaney and Deagan, 1989; Deagan, 1976; Ewen, 1984, 1985; King, 1984; Zierden, 1981).

With the completion of decades of ongoing research, it has been possible to undertake, in some cases, the study of an entire community. Such a study is a logical outgrowth of accumulated interdisciplinary research, as "it shares, with historical ethnography, a concern for in-depth analysis of people and culture in social context; it deals, like many analyses in historical archaeology, with issues of ethnicity, acculturation and social structure; and its research strategy requires the comparison of household level data" (Cusick, 1995:59). This comprehensive type of study has been possible for St. Augustine, as Deagan's (1983*) Spanish St. Augustine: The Archaeology of a Colonial Creole Community* ably demonstrates.

At the western end of the state is another colonial site claiming to be America's oldest city: Pensacola. In 1559, Tristán de Luna founded a colony on Pensacola Bay. Immediately beset by natural calamities and a loss of supplies, the colony foundered and was abandoned in 1561. Over 130 years would pass before the Spaniards again attempted another settlement in the area. This settlement would survive, though it would be won, and lost, by both the French and the British over the ensuing centuries.

The terrestrial archaeology of this colonial town has been summarized by Judith Bense (1999), while the maritime study of the harbor has been discussed by the project director Roger Smith (R. Smith et al., 1998). A special focus of the work in Pensacola is Santa María de Galve, the presidio founded at the end of the seventeenth century. Bense (2003, 2004) and her students (e.g., Parker, 2001; Pokrant, 2001; Swann, 2002) have

examined many aspects of daily life at this remote outpost.

Another colonial town that has witnessed a great deal of archaeological research, mostly under the direction of Stanley South, is Santa Elena. Founded just after St. Augustine, Santa Elena was originally intended to be La Florida's capital and briefly served in that capacity. It had a population of several hundred before being abandoned in favor of St. Augustine in 1587.

Located on the U.S. Marine Corps base on Parris Island, the site was discovered by Major George Osterhout in 1923. Osterhout believed he had located Charlesfort, the French fort established by Jean Ribault in 1562. Sixty-six years later, South reopened Osterhout's excavations and found that they actually pertained to the later Spanish fort, San Marcos. South worked on and off at the site for nearly 20 years. During this time, he discovered the main settlement of Santa Elena and the earlier Spanish fort, San Felipe (South, 1988, 1991). Excavations in each of these locations yielded information on the lifestyles of the early settlers, as well as data on status differences within the settlement and interactions with the Native inhabitants. In perhaps one of the great ironies of archaeology, reanalysis of the artifacts of Fort San Felipe revealed that the Spanish built on top of the French fort that was originally there (DePratter and South, 1990). George Osterhout nearly found Charlesfort after all!

Exploration and Early Contact

The Contact period in the southeastern United States can be roughly equated with the sixteenth and seventeenth centuries. Hudson and Tesser (1994) have called these the "forgotten centuries" because little is known of the Indians of the interior Southeast or of their interactions with Europeans. Like ethnicity, the contact between two cultures and its consequences has always been a concern of historical archaeology in general and Spanish colonial archaeology in particular.

"First contact" in the Southeast involved the Spanish conquistadors in their quest to explore and exploit what the earliest of them, Juan Ponce de León, dubbed La Florida. Archaeologically, most of the work concerning Spanish exploration in the Southeast centers on the sixteenth-century expeditions of Pánfilo de Narváez (Marrinan et al., 1989), Juan Pardo (DePratter et al., 1983; Hudson, 1990), Tristan de Luna (Hudson et al., 1989), and Hernando de Soto (Clayton et al., 1993; Hudson, 1997; Milanich and Hudson, 1993). Of these, the de Soto *entrada* has occupied the most attention and will be discussed in more depth later in this chapter.

Beginning with Hale Smith's (1956) seminal work *The European and the Indian*, the topic Spanish–Indian contact and indigenous cultural change has inspired numerous theses and dissertations as well as several excellent summary compilations. The latter include *The Protohistoric in the Mid-South:1500–1700* (Dye and Brister, 1986), *First Encounters: Spanish Explorations in the Caribbean and the United States, 1492–1570* (Milanich and Milbrath, 1989), and *Archaeological and Historical Perspectives on the Spanish Borderlands East* (Thomas, 1990), Columbian Consequences, vol. 2.

The possibly disastrous effects of Spanish-introduced diseases upon Native inhabitants are a recurrent subtheme in these Contact period studies. Henry Dobyns (1983) and later Marvin Smith (1987) made compelling cases for precipitous aboriginal depopulation based on both historical accounts and archaeological evidence. The pandemic hypothesis was embraced by virtually all researchers in the Southeast during the 1980s and early 1890s and still is widely cited today. However, a reanalysis of the archaeological evidence (cf. Burnett and Murray, 1993; DePratter, 1994; Ewen, 1996; Hutchinson and Mitchem, 2001) suggests that what appears to be population decline may actually be population dispersal due to environmental and political factors. Epidemic disease is not well documented archaeologically and may not have been the sole, or even primary, cause of cultural change during this period.

The first Europeans to encounter the indigenous societies of the Southeast were Spanish explorers. Beginning with Juan Ponce de León in 1519, the royal *asiento* (contract) to explore and conquer La Florida passed successively to Lucas Vázquez de Ayllón in 1521, then to Pánfilo de Narváez in 1528 and, finally, to Hernando de Soto in 1539. Each of these conquistadors failed to accomplish their objective, dying in the attempt.

Archaeologists have been interested in these expeditions for a variety of reasons that usually reflected the larger concerns of the time. Of these explorers, Hernando de Soto has commanded the lion's share of scholarly attention. The 4-year odyssey of de Soto and his 600-plus man army crossed 10 states, impacted scores of Native polities, and was recorded in four separate narratives. Though dozens of scholars had read these chronicles and searched for over a century to locate the associated sites, it was not until March of 1987 that the archaeological remains of a de Soto campsite were found.

In October of 1539, Hernando de Soto and his expedition of over 600 Spaniards established a winter base camp at an Indian village in the environs of what is now Tallahassee, Florida. Occurring fewer than 50 years after Columbus's first voyage, it was the first wintering on the longest overland reconnaissance of the United States during the sixteenth century. The expedition occupied this encampment until early March of 1540, during which time forces were set in motion that irrevocably shaped the nature of European–Indian interaction in the continental United States. The location of this site was lost to modern researchers until it was accidentally discovered by B. Calvin Jones while he was searching for evidence of a later Spanish mission site.

The Governor Martin site (named for John Martin, the former governor of Florida whose mansion dominates the site) was discovered fortuitously by Jones while monitoring the construction of a new office complex. Subsequent archaeological investigations conducted by the Florida Department of State (Bureau of Archaeological Research) in 1987 confirmed the site as that of Hernando de Soto's winter encampment in Florida. Owing to the extraordinary degree of cooperation between developers and archaeologists, most of the threatened property was excavated prior to the commencement of construction activities. Excavations recovered several hundred chain-mail links, early-style Spanish olive jars, sixteenth-century majolica fragments, a dozen glass chevron beads, a crossbow point, and five copper coins dating to the early sixteenth century (Ewen and Hann, 1998:105–107). The aboriginal material also dates to this time period (known archaeologically as the late Fort Walton period).

From an archaeological perspective, the de Soto encampment site represents a solid chronological marker for refining the local ceramic sequence. This information is being used to seriate other Apalachee sites with a more precise absolute date rather than a rough relative date. Spanish artifacts recovered from the Martin site are being used for comparative purposes by other de Soto researchers elsewhere in the Southeast.

Archaeology in general, and archaeology in north Florida in particular, have benefited from the information provided by the DeSoto-Apalachee Project. The early-sixteenth-century Apalachee village associated with the de Soto encampment and the early-seventeenth-century mission discovered by the survey represent important phases in the history of the Apalachee Province. When combined with the Lake Jackson site, which predates the Martin site and the site of San Luis de Talimali (1656–1704), the chronological sequence of the province is unbroken. Thus, the Apalachee province becomes an archaeological laboratory for the study of the rise and fall of an aboriginal chiefdom.

Well outside of Florida, another sixteenth-century Spanish explorer site has been located in western North Carolina. The Berry site, in the foothills region, is believed to be the village of Joara, where Juan Pardo established Fort San Juan in 1567 (Beck, 1997). Excavations have revealed several burned structures exhibiting both native and European influences (Beck and Ketron, 2003; Best and Rodning, 2003; Moore et al., 2004; Rodning, 2002).

Future Directions

It would be nice to be able to say that the future will see an even closer alliance between archaeologists and historians. However, there is not as much actual collaboration between archaeologists and historians as one would expect given the subject matter. With some notable exceptions, archaeologists tend to look selectively at historical publications and employ historians to assist on individual projects rather than consistently partner with them. Many historians (again with notable exceptions) see archaeology as adding little to their research except for some anecdotal trivia. Historians and archaeologists tend to ask different questions of their data.

David Hurst Thomas (1974:4) delineated the difference between the disciplines in the following way:

> Archaeology's ultimate aim, the study of cultural processes, deals not with things unique, but rather with things recurrent. Anthropological archaeology's goals are thus timeless and spaceless, the final aim being to generalize about *all* [people] in *all* times. The systematic examination of alternative explanatory hypotheses is what makes the archaeologist a scientist rather than a historian.

Some archaeologists may disagree with Thomas (and he may have revised his thinking somewhat since he wrote that), but the archaeological literature tends to support these observations. Even the scientific humanism approach seems to favor science as the preferred method for investigating sites.

Still, archaeologists are reaching out to other disciplines, if only to exploit their literature. In many cases, historians have enthusiastically contributed to the archaeological database. Historian Michael Gannon (1965) was among the first to recognize the value of collaboration with archaeologists in uncovering the history of St. Augustine. John Hann (1988, 1990, 1991, 1996, 2006) has rewritten the Florida's mission period history with his translations of original documents pertaining to that period. This has rendered invaluable assistance to archaeologists working throughout La Florida.

Future trends in Spanish colonial research will, no doubt, reflect the sociopolitical trends of the times. Archaeologists have chosen to continue reexamining the contact experience now that the spotlight of the Quincentennial is past. Many archaeologists are working on building a new framework for the study of culture contact through world systems theory, models of evolution, and theories of creolization and ethnicity. There is little agreement at this point on which paradigm to embrace, yet there is agreement that these subjects bear further investigation. Certainly these discussions will provide guidance for future research.

A logical place to start would be to follow up on the previous work of Spanish colonial archaeologists. Kathleen Deagan derived a pattern of Spanish colonial adaptation to the New World from her work in St. Augustine**.** This was later tested at Puerto Real, Haiti (Ewen, 1991). Recent observations have found that this pattern does not apply in all situations (cf. Williams, 1993; Van Buren, 1999). Does this invalidate the hypothesis or merely cause us to modify it? Perhaps the Spanish Colonial Pattern changes through time (i.e., contact, initial settlement, imperial state) or varies somewhat from place to place (i.e., the U.S. Southeast and the Caribbean versus the Southwest). Perhaps a pattern can be established by comparing Spanish colonial sites with contemporary sites of other colonial powers. How are they different, how are they alike, how do we account for this? Is there a universal colonial pattern? Why or why not? There would appear to be much grist here for the research mill.

An interesting cultural phenomenon that has not been addressed is the impact of the growing Hispanic community on Spanish colonial archaeology in the southeastern United States. This region has experienced a tremendous influx of Latin American immigrants, but curiously, no concomitant rise in interest in the archaeology of Spanish sites. Or perhaps there has been a rise and it has not been documented. It would be interesting to construct a demographic profile of the tourist population that visits the reconstructed sites at St. Augustine and San Luis, to better understand which audiences are being reached by these kinds of site interpretations.

The Quincentennial established that Spanish colonial archaeology is not the arcane interest of a handful of archaeologists. Archaeologists continue to focus their research on the questions that count and to reassess those questions in light of new information and approaches (see Deagan, 1988). Our research may focus on reconstructing past lifeways, assessing the impact of colonization on both Spaniards and Native inhabitants, or understanding the motivations of the Spanish conquistadors. These questions transcend the immediate questions one asks when excavating a site (e.g., did de Soto sleep here?), and we should all consider them on a regular basis.

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Historical Archaeology in South America

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Introduction

South America is a huge subcontinent that encompasses a wide variety of physical landscapes and environments. It includes different peoples, languages, and cultures, even if outside observers tend to look at it as a single entity. In the first three centuries of European colonization, the main division within this continent was between those areas controlled by the Portuguese and those controlled by the Spaniards, but within these vast territories the distinctions between colonists, natives, and African slaves also shaped society, resulting in diversity rather than homogeneity, and undermining any essential common features that could foster forms of identity beyond the local. In the nineteenth century, with the struggle for the end of direct European rule, movements for political independence attempted to create new national identities almost out of the blue, sometimes resulting in the expansion of regional identities, as happened with the creation of the very concept of Argentina in the minds of the elites, who imagined the country as an extension of Buenos Aires. In contrast, in the case of Brazil, a national identity was created out of an opposition to Spanish-speaking and republican Hispanic America, the Brazilian Empire conceiving of itself as a Portuguese-speaking kingdom in the New World. Still others would emphasize the indigenous contribution to the new national identity, as was the case in Peru.

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Whatever the case may be, the very concept of Latin America was foreign to the subcontinent. However, there are several common features that permeate, to a variety of degrees, South American societies, both in terms of their history and cultural characteristics. The Iberian colonization brought with it both a specific worldview and a way of dealing with social life in general. Portuguese and Spanish *conquistadores* (conquerors) brought with them a medieval, Catholic outlook directly linked to the Crusades and the *reconquista* (or recovery) of Muslim lands on the Iberian Peninsula itself, resulting in a strongly Catholic civilization in the Americas. A hierarchical Mediterranean social structure, based on patronage and status, was also brought to South America, being compounded here by new forms of subordinate social groups, notably the native inhabitants and African slaves. The overall historical context was also the same: South American colonial areas were doomed to produce raw materials for the profit of colonial powers.

From the beginning of the nineteenth century, independence movements would further hinder communication inside the subcontinent, but the common features and international context would, on the other hand, produce similar trends in the different countries. Aside from the continuity in cultural traits already mentioned, there was an increase in economic, political, and cultural influence by new foreign powers. These were most notably Britain, France, and the United States, formerly inaccessible as a result of strict control by both the Spanish and Portuguese crowns over the colonies. The political systems of different countries varied considerably, but the common feature was the

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continuation of oligarchic rule, usually by means of authoritarian social control. The twentieth century witnessed a succession of dictatorships being interrupted time and again by liberal democratic periods; for the first time in the history of the area, most countries have been ruled by elected authorities since the middle to late 1980s.

It is in this overall historical context that we can talk about the history of historical archaeology in South America, keeping in mind the various sources of diversity as well as unity. Archaeology began here as a discipline derived from that of the United States, a branch of anthropology focused on Native American, or indigenous, North American preconquest populations, even though the influence of European prehistory has always been felt throughout the area. The first, and still most prestigious, archaeological field to develop was the study of the so-called high civilizations, first and foremost the Inca, but also other prehistoric Andean societies. Prehistoric archaeology lagged behind elsewhere, finally taking off after World War II thanks both to the renewed interest in "primitive" societies and to the expansion of the interests of European and United States scholarly establishments in peripheral areas such as South America. Even though there was no historical archaeology as such, heritage management concerns led to the enactment of historic-building protection laws and to the development of heritage institutions—mostly due to the activities of architects, art historians, and other scholars concerned with the preservation of historic assets.

Historical archaeology developed only recently, in the last 10–15 years, depending on the country (Funari, 1996). This development is the result of the triumph of liberal democracy since the 1980s, as for a long time authoritarian regimes did not support archaeological studies of the historical period because archaeology almost inevitably deals with ordinary people's lives. Freedom fostered international contacts so that archaeologists in South America could, for the first time, try to emulate their U.S. colleagues in studying the material culture of the historical period. Its recent upsurge was also fostered by laws enforcing the protection of historical material culture in the context of both urban and rural development, in the latter case mostly due to the construction of hydroelectric dams. The growth of interest in historical archaeology can be estimated by the increasing number of papers given at archaeological conferences and by the publication of articles in journals. In 1994, at the World Archaeological Congress 3, in India, for the first time there was a whole theme on historical archaeology, co-organized by a European, an African, and a South American. This indicated that Latin American historical archaeology has a new place within the discipline in contributing to its development worldwide (Funari et al., 1999).

Subjects of Investigation

Historical archaeology in South America is a diverse field. This section is an overview of the most relevant historical archaeological investigations conducted to date in South America, dividing them into projects focusing on colonial archaeology and those using the archaeology of capitalism as a theoretical perspective. This division provides an appropriate temporal and conceptual framework for the research topics discussed below.

Colonial Archaeology

Historical archaeology has already proved its potential for the study of European settlement in America. From different perspectives and in several geographic locations, the discipline has been able to shed light on social, economic, ideological, and ecological aspects of colonization and conquest. Archaeological analyses on the subject have usually focused on Hispanic and Portuguese urbanization, daily life in religious missions, ethnicity and contact, among other topics.

The origins of historical archaeology in South America are closely associated with the study of high-profile historical-period sites—often related to European colonization of the continent. As a consequence, the first investigations were oriented toward studies focusing on early colonial cities. In Argentina, there have been relevant investigations since the 1970s. Among them, it is important to take note of the archaeological project developed by

Zapata Gollán in the Spanish city of Santa Fe la Vieja (1573–1660). Zapata Gollán used archaeology as a method to validate historical data regarding location and identification of Santa Fe, as well as different aspects of the city's daily life (Zapata Gollán, 1956, 1970, 1981, 1991). Archaeological remains recovered by Zapata Gollán have been the partial subjects of later studies (Carrara 1996, 1997; Carrara and De Grandis, 1992, 1997; Cerruti, 1983; García Cano, 2000; Senatore, 1995; Zarankin, 1995; Valentini and García Cano, 1997).

Buenos Aires has been the object of intense colonial investigations. Since the 1980s, archaeologist Schávelzon has excavated different areas of the city, and he has published numerous works oriented toward the description and classification of the materials recovered (Schávelzon, 1992a, 1992b, 1994a, 1994b, 1995). At the same time, he has discussed several characteristics of Buenos Aires social life—including the presence of African American ethnic groups (Schávelzon, 1991, 2000, 2003). In addition to Schávelzon, other archaeologists have studied archaeological remains from Buenos Aires, focusing on topics such as fauna (Silveira, 1996), industry (Weissel, 1998), architecture (Zarankin, 1999, 2002), or pottery (Senatore, 1995).

New, innovative colonial studies have recently been undertaken in Patagonia. Senatore has analyzed different colonial urban projects intended to integrate the region under Spanish control. The eighteenth-century village of Floridablanca (1780–1784) represented the Crown's intentions to test a model of social order that had emerged from Enlightenment ideas. The completion of this plan has constituted the main interest of Senatore's (2000, 2002, 2003, 2004) investigations in the village. Two centuries before Floridablanca's foundation, Nombre de Jesús (1584) was established to exercise strategic control over the Straits of Magellan—a region frequently visited by English privateers. Through analysis of osteological remains, material culture, and diverse documentary sources, Senatore (2008) seeks to obtain information about the way settlers lived and died in a hostile place. There has also been archaeological research in the Falklands (or Malvinas) Islands (Philpott and Barker, 1996).

In Brazil, urban archaeological projects are currently underway in several Portuguese colonial cities currently have their own archaeological projects. Salvador—capital of the state of Bahia and first capital of Brazil—has been the focus of many excavations headed by Etchevarne (2001). His investigations have been dedicated to studying Bahia's history from a material point of view. Other cities that—because of their accelerated growth—have developed urban archaeological programs are San Pablo and Porto Alegre. In San Pablo, the work of Andreatta (1981–1982) has stood out since the 1980s, when she started conducting several salvage archaeology projects. In the case of Porto Alegre, Tocchetto has run an interesting study of transformations in local society that focus on material typologies, consumer choice, discard patterns, and urban growth (Santos, 2005; Thiessen, 2005; Tocchetto, 2004; Tocchetto et al., 2001).

In addition to urban archaeological projects in Argentina and Brazil, there have been studies of colonial cities elsewhere in South America. It is worthwhile mentioning Fusco's (1990) investigations in Colonia, Curbelo's (1996) in Montevideo and Punta del Este (Uruguay), Ortiz Troncoso (1970, 1971) and Massone's (1978, 1983) in Rey Don Felipe (Chile), Therrien's (2004) in Bogotá, López and Cano Echeverri's (2004) in Pereira (Colombia), Jamieson's (2000) in Cuenca (Ecuador), Navarrete's (1997) in La Guaira, and Cruxent's (1995) in Cubagua (Venezuela).

The first records of investigations at Jesuit missions—particularly in the area surrounding the limits of Argentina, Paraguay, and Brazil—refer to exploratory trips headed by Ambrosetti in the beginning of the twentieth century. It was not until the 1980s, however, that the archaeology of missions began in earnest. At that time, Rovira (1989) focused her work on Mission Nuestra Señora de la Candelaria. Her objective was to study the effects of European colonial expansion on Guarani populations. Meanwhile, Kern (1985, 1987, 1989, 1998) offered an overview of the historical, ethnographic, and cultural nature of Guarani groups who lived in *reducciones* (settlements established within the colonial system where the inhabitants of outlying areas were brought together to live). Other archaeologists are now taking part in restoration activities or ethnoarchaeological investigations at the missions (Poujade, 1995, 1996).

Since the 1990s, there has been an increase in studies focusing on the history of social minorities—ethnic,

age, and gender groups that persisted despite being invisible in official narratives. Within this context, the study of African American populations became relevant in South America. Without a doubt, the most important project developed in the region has been the study of the Palmares Quilombo (Alagoas, Brazil), which constituted a long-lasting example of slave resistance. Investigations at Palmares have allowed Funari, Orser, and Rowlands to investigate subjects new to South American historical archaeology, such as identity, the active role of material culture, and the social use of the past (Funari, 1995, 1999; Funari and Vieira de Carvalho, 2005; Orser, 1994; Rowlands, 1999).

Agostini was one of the first archaeologists to study African pipe collections excavated in Vassouras, as well as the permanence of African cultural traditions in present Brazilian society (Agostini, 2002). Another investigator interested in studying African American groups was Schávelzon. In *Buenos Aires Negra* (2003), he analyzed diverse archaeological collections to distinguish a characteristic African "type" of artifacts. As a consequence, he stressed the relevance of African American groups—now almost invisible—in Buenos Aires's colonial past.

Interest in ethnicity does not stem exclusively from research on African American groups, but also refers to the construction and negation of post-contact identities—including relationships between conquerors and conquered indigenous societies. In general, most studies conducted in colonial cities and religious missions consider this subject of investigation. Nevertheless, there are many archaeological projects that deal with colonial contact at a regional level, such as Rafael Goñi's work in Neuquén (Argentina), Alicia Tapia's (2005) in la Pampa (Argentina), and Scaramelli and Tarble de Scaramelli's (2005) in Orinoco (Venezuela).

Archaeology of Capitalism

In recent work, historical archaeology has usually been understood as a discipline concerned with the formation of the modern world—associated with capitalism and a new social order (Johnson, 1996, 1999; Leone, 1988, 1995, 1999; Orser, 1996, 2000). Under the post-processualist umbrella, major topics of discussion have revolved around the appearance and consolidation of new discourses, practices, and identities; the construction of national states and boundaries; and such contemporary cultural interests as the consequences of political repression during military regimes or the social use of the past, among others.

Without identities there is no society. The understanding of modernity requires considering changes in the relationships among individuals, as well as between individuals and things (Zarankin and Senatore, 2002). This theoretical perspective forces archaeologists to analyze singularities in local practices, deconstructing hegemonic discourses and stressing the multiple trajectories upon which South American society was built. One of the most interesting studies on the subject has been conducted by Andrade Lima (1996, 1997, 1999), who analyzed the appearance of new practices and the construction of different class and gender identities in nineteenth-century Rio de Janeiro. Different archaeologists have considered transformations in nineteenth-century South American cities—such as Tocchetto (Symanski, 1998; Thiessen, 1999, 2005; Tocchetto, 2004), who studied Porto Alegre's society; Plens (2004), who discussed spatial organization in San Pablo's workers' villages; Therrien (2004), who considered consumer behavior in Bogotá; and Zarankin (1999, 2002), who analyzed transformations in domestic and public architecture in Buenos Aires.

Another subject gaining the attention of archaeologists is the expansion of national boundaries during the second half of the nineteenth century. In Argentina, several forts have been excavated with the aim of understanding conquest strategies and ethnic relationships between indigenous populations and groups of European descent. It is particularly important to mention Goñi's investigations (Goñi and Madrid, 1999) in Fuerte Blancagrande; Gómez Romero's (Gómez Romero, 2005; Gómez Romero and Ramos, 1994) in Fortín Miñana; Guerci and Mugueta's in Cantón Tapalqué (Guerci et al., 2004); and Langiano, Merlo, and Ormazabal's in Fuerte San Martín or Sauce Corto (Langiano et al., 2002). Several archaeologists are also excavating aboriginal settlements to investigate changes experienced by local societies during contact and conflict with national states (Goñi, 2000; Pedrotta, 2002; Pedrotta and Bagaloni, 2005; Tapia, 2005).

Historical archaeology in South America has also proven its political commitment to contemporary human rights causes. In particular, it has supplied tools for the study and elucidation of the consequences wrought by dictatorships in the region. The Equipo Argentino de Antropología Forense (EAAF) gives us a clear example. By excavating common graves in cemeteries and at army bases, EAAF has been able to shed light on the killing of thousands of people during military regimes, as well as to give back the remains to their families (Doretti and Fondebrider, 2001; Equipo Argentino de Antropología Forense, 1990, 1991, 1993). New projects are now focusing on clandestine detention centers, where—besides constructing a "material memory" of genocide—different repressive strategies and resistance practices might be studied (Funari and Zarankin, 2006).

Finally, it is worth noting the development of two different fields of study: public and underwater archaeology. Since the 1990s, public archaeology has been interested in interacting with local communities, democratizing academic production, and protecting heritage resources. At present, several papers explore these subjects (Eremites de Oliveira, 2005; Funari, 2002; Funari et al., 2005a). In the meantime, underwater archaeology is facing the negative impact of treasure hunters. South American archaeologists have excavated dozens of shipwrecks, offering valuable information on consumer preferences, transported goods, ship traffic, and different aspects of sailors' daily lives. They have also contributed methods and techniques for fieldwork and submerged heritage management and protection (Elkin, 2002; Rambelli, 2002). Underwater archaeology has been particularly important to the emergence and development of historical archaeology in South America, as it has been able to reach a broad public and to address a series of both empirical and theoretical issues. Underwater archaeology has had a huge visibility in the media, from newspapers to television shows, not least because of the spectacular images it is able to provide.

Empirical surveys and excavations have produced evidence not only on traditional subjects, such as onboard life, but also on such oft-neglected ones as slave ships. Considering the importance of ethnicity and ethnic issues in South America, the study of the transportation of African slaves is a promising one. Underwater archaeology has also been instrumental in collaborating with historical archaeologists working in coastal areas—as forts, fortlets, and other defensive land facilities are better understood when related to ship movement and control (Funari and Oliveira, 2005). In theoretical terms, underwater archeology has been pivotal for historical archaeologists in South America, as it deals with issues such as onboard, face-to-face, confined life, and provides historical archaeologists working in the continent with insights for understanding other confined institutions, such as slave quarters or detention camps (Funari and Zarankin, 2006).

Final Words

Latin American historical archaeologists have been full participants in the discipline for the last 15 years or so. Charles Orser's (1996) now-classic *A Historical Archaeology of the Modern World,* for the first time in the history of the discipline, pays attention to Latin America, as well as to Europe and the United States. The discipline, previously concerned with a narrow American definition of "post-prehistoric sites in the New World," broadened its scope to include a much more open perspective, including the archaeology of all historical societies (see Andrén, 1998).

In 1994 and 1995, *Historical Archaeology in South America,* edited by Stanley South in the United States, published 16 volumes distributed in the United States and Latin America. This it contributed to an early spread of ideas and interpretations by such young scholars as María Ximena Senatore and Andrés Zarankin, to quote two of the most often cited in the international literature. As a result of the not-irrelevant role of Latin America in historical archaeology, the prestigious *Encyclopedia of Historical Archaeology,* edited by Charles E. Orser, Jr., had seven consultant editors, six from Europe, the United States, and Australia, and one from Latin America (Funari). Several entries were written by Latin American archaeologists (Pedro Funari, Francisco Silva Noelli, Ana Piñon, Gilson Rambelli, Maria Ximena Senatore, and Andrés Zarankin). Another prestigious *Encyclopedia of Archaeology,* this one edited by Tim Murray, also has contributors

from Latin America (Roberto Cobean, Alba Mastache Flores, Pedro Funari, Marion Popenhoe de Hatch, Leonor Herrera, José Luiz Lanata, Matilde Ivic de Monterroso, and A. Lautaro Nuñez). Charles Orser, Jr., in his *Introducción a la arqueología histórica*, published in Buenos Aires in 2000, invites the readers to use books published by several Latin American historical archaeologists.

In 1997, the first journal aiming at a world audience was launched by Plenum. *The International Journal of Historical Archaeology* was established as the standard quarterly on historical archaeology, and the editorial board included two Latin Americans (Pedro Funari and Daniel Schávelzon). Several papers from Latin American authors have since been published, and the scope of this journal for the first time included, as proposed by Latin Americans, the study of historical-period societies in general. The historical archaeology of the Mediterranean has also produced books and a plethora of scholarly articles by Latin Americans—published in English, French, Italian, and Spanish in Europe and the United States—often quoted by their non-Latin American colleagues. In leading, innovative journals, as *Public Archaeology*, *Journal of European Archaeology*, *Journal of Social Archaeology*, *World Archaeological Bulletin*, and *World Archaeology*, several papers by Latin Americans attest to the presence of Latin American authors on the world stage. *Current Anthropology* has also invited and published comments by Latin American archaeologist to papers written by leading European or U.S. authors, attesting again to the growing relevance of Latin American ideas and theoretical stances in world archaeological discourse. Latin America archaeology in general, and historical archaeology in particular, has thus a much broader presence than in the past.

In theoretical terms, the Latin American experience also led to the discussion of such concepts as multiple identities by several archaeologists, such as Lourdes Domínguez and Gabino de La Rosa, from Cuba, which challenged traditional acculturation interpretive models grounded in normative frameworks. The recent publication of *Global Archaeological Theory: Contextual Voices and Contemporary Thoughts,* edited by two Latin Americans (P.P.A. Funari and A. Zarankin) and a North American (E. Stovel), put together archaeologists from different continents to discuss the main theoretical issues of the discipline. Whatever the case may be, Latin American historical archaeology is no longer a simple raw-material contributor—it contributes to the advancement of the discipline as a whole.

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Historical Archaeology in Central and Northern Mesoamerica: Development and Current Status

Thomas H. Charlton, Patricia Fournier, and Cynthia L. Otis Charlton

Introduction

Mesoamerica, an indigenous New World culture area (compare definitions in Adams [2005], Kirchhoff [1943], Weaver [1993], and West [1964]) (Fig. 1), is characterized by the presence of state-level societies, with highly differentiated cultures and linguistically separated peoples in a geographical area of substantial environmental variation (Carmack, 1996). The region is one of great interest to scholars investigating early emergent civilizations through comparative studies. As a consequence, substantially more research has been conducted on the Prehispanic civilizations than on the developments after contact with Old World civilizations in the sixteenth century. For the purposes of this chapter, we are using the boundaries of Mesoamerica as present in the sixteenth century.

After 1521 C.E., Mesoamerica, with its peoples and cultures, through several imperial administrative units (Audiencias of Guatemala, Mexico, and Guadalajara), was incorporated as a lower-level node into the Spanish worldwide empire. For Mesoamerica, that externally imposed empire persisted about 300 years, at which time regional national revolutions resulted in independence from Spain for several emergent nation-states of Hispanic origin. One exception is the nation-state of Belize, a former British colony on the Caribbean that gained its independence through legislative means in the late twentieth century.

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Mesoamerica today falls within the nation-states of Mexico, Belize, Guatemala, El Salvador, and in parts of Honduras, Nicaragua, and Costa Rica. In this presentation, we include those areas of Mesoamerica falling outside of the Maya region in the sixteenth century. As a result, the section of Mesoamerica included here falls entirely within Mexico. It excludes those parts that fall in Mexico's Yucatan Peninsula and state of Chiapas (except for the Pacific coast), and the parts found in the Central American countries of Belize, Guatemala, El Salvador, and in sections of Honduras, Nicaragua, and Costa Rica (see Fowler, this volume).

Included in our study are the Soconusco area along the Pacific coast of Chiapas, the Isthmus of Tehuantepec, the western section of the State of Tabasco and the Gulf Coast to the west and north up to and including the Huasteca, and areas to the west and north including Oaxaca, the Mesa Central, West Mexico, and the Pacific coastal plain and adjacent Sierra Madre Occidental into northwest Mexico. The northern borders are defined by the limits of complex, agriculturally based societies (see Kirchhoff [1943] and Sauer [1941] as summarized in West [1964:366]).

Just as the boundaries of the Audiencias did not coincide with the boundaries of Mesoamerica, neither did the greatest extension and impact of Hispanic peoples and culture north or south of Mesoamerica. The Spanish imperial system present in Mesoamerica extended outside that culture area and incorporated non-Mesoamerican peoples, both agriculturists and hunter-gatherers, from the Californias to Texas, and east to Florida (Audiencia of Santo Domingo) in what is now the United States, as well as the northern lands

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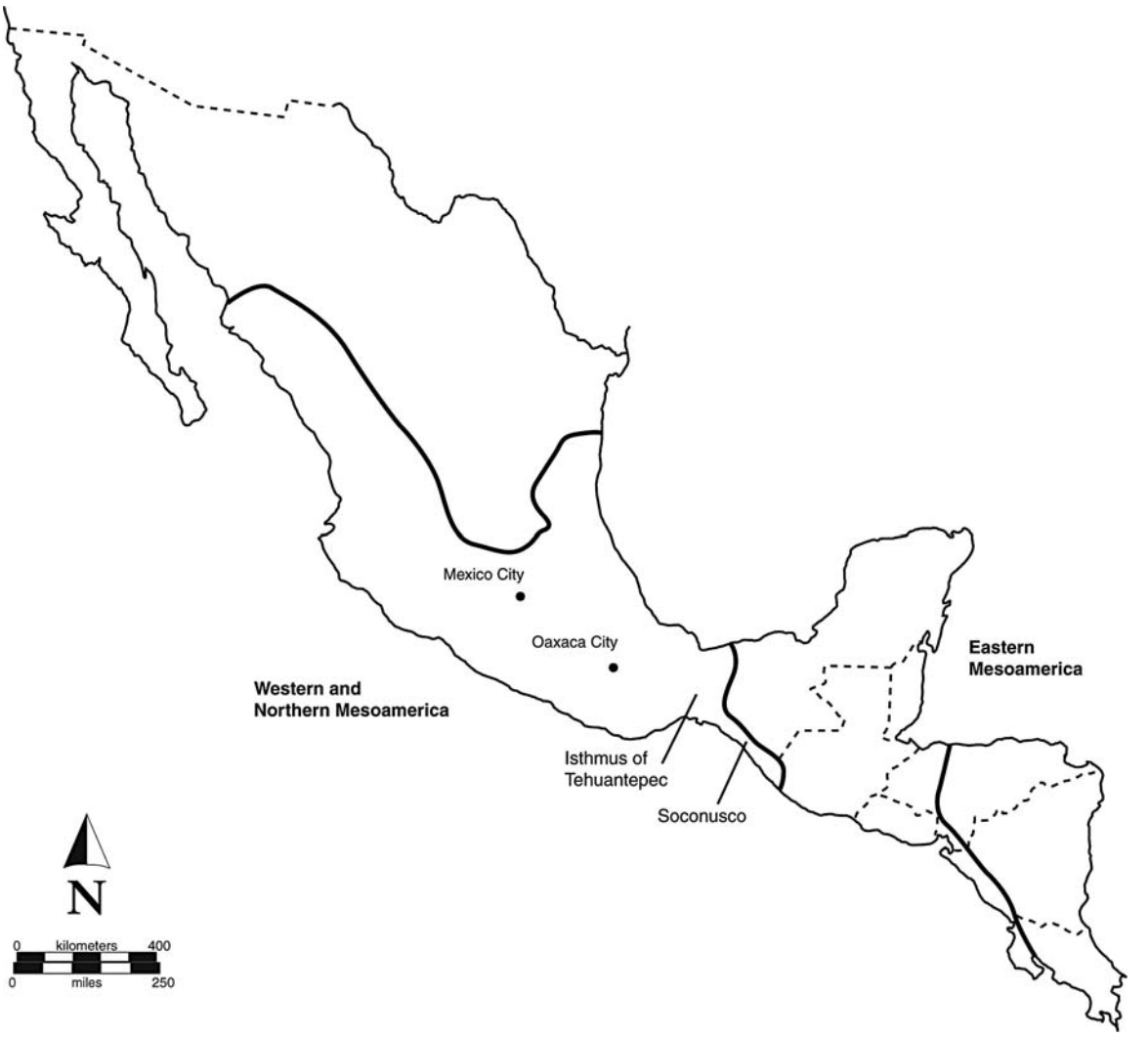

Fig. 1 Mesoamerica with subareas and important places mentioned in the text

of present-day Mexico, stretching from Baja California to the state of Tamaulipas.

Beginning in the late eighteenth century, many of the lands outside of Mesoamerica, which reflected the northernmost expansion of Hispanic power and culture, became alienated first from the Spanish Empire and, after 1821 C.E., from Mexico (the nation-state successor to the Hispanic Empire in this area), all as the result of American territorial expansion (Weber, 1992). The Hispanic-influenced areas presently held by the United States were the loci of early historical and historical archaeological investigations that influenced studies later carried out in western and northern (Mexican) Mesoamerica.

Historical Archaeology in Mexican Mesoamerica: A Brief Review

Historical archaeology within the areas of Mesoamerica considered here is a relatively recent phenomenon, due in substantial part to the archaeological attention paid to the still impressive remains of the Preconquest Mesoamerican cultures. The Postconquest period is usually studied by historians and ethnohistorians using documentary sources of various kinds including official Spanish records and those of indigenous communities, but not through archaeology.

As we and others have noted (Charlton, 2002; Charlton and Fournier, 2008; Fournier, 1985, 2003;

Fournier and Miranda, 1992; Gasco, 1996a; Hernández Pons, 1998), those scholars pursuing the archaeology of Late Postclassic, but still Preconquest, Mesoamerican cultures (e.g., Purépecha: Pollard, 1993; Aztec: Charlton, 2000; Vaillant, 1938; Zapotec and Mixtec: Pohl and Byland, 1990; Soconusco: Voorhies and Gasco, 2004) with available textual sources are practicing, in essence, historical archaeology. In this chapter, however, we restrict historical archaeology in Mesoamerica to those investigations conducted using both archaeology and relevant textual materials for the Colonial (1521–1820 C.E.) and Independence periods (1821 C.E.–present). The focus of these studies is on the processes and results of cultural changes in indigenous Mesoamerican cultures, in the cultures of Hispanic and other Old World origins introduced into Mesoamerica, and in those newly emerging syncretic cultures that developed with various combinations of traits of Mesoamerican and Old World cultures, occurring at any time from the Spanish conquest in the early sixteenth century to the present.

Roots of Historical Archaeology in Mesoamerica

There are three major sources or influences associated with the introduction of historical archaeology into those regions of Mesoamerica considered here.

The Influences of American Interests in the Spanish Legacy

Historical archaeological research in those areas of the United States formerly held by Spain and/or Mexico developed as part of both popular and scholarly American interest in "The Spanish Legacy and Historical Imagination" (Weber, 1992:335–360). Robert Jackson's work (e.g., 2005) shows a continued historical interest and the three volumes edited by Thomas (1989, 1990, 1991) present recent archaeological approaches in the Borderlands as well as in the Maya area of Mesoamerica. Because Skowronek (this volume) deals with the historical archaeology of the Northern Borderlands and the Pacific, those extra-Mesoamerican but Hispanic-influenced areas of northern Mexico and the United States, we will note only a few examples of such research here as background to Mesoamerican historical archaeology.

The excavations (1937–1939) at the seventeenth-century Franciscan mission of Awatovi in northeastern Arizona (Montgomery et al., 1949) are accompanied by detailed histories, descriptions, and distributional studies of tiles, murals, and ceramics in central Mexico and Spain (Smith, 1949), to a great extent based on research carried out by persons interested in Hispanic ceramics. These were not archaeological studies per se, but involved methods used by historical archaeologists in Mesoamerica: the careful identification of ceramics used in architectural contexts (e.g., Fournier, 1992). The same is true for comparative studies of Franciscan religious structures (Montgomery, 1949), where additional information on which to base interpretations was sought in both Mexican Colonial documentation and in descriptions of extant religious buildings in Mexico City.

Similar interest in Spanish missions had been expressed by Carl Sauer, a cultural geographer, and his students (West, 1979). Although incorporating environmental and ecological studies, archaeological settlement pattern surveys, and detailed mapping, Sauer and his students concentrated on missions and other settlements in northern Mexico (Sonora, Baja California), enfolding these into the available historical documentation and recognizing the expansion of Hispanic culture out of central Mexico. Excavations do not seem to have been part of their investigative techniques (Meigs, 1935; Sauer and Meigs, 1927). Similar settlement pattern surveys are still carried out in north Mexico by cultural geographers (e.g., Doolittle, 1988).

A further example of American interests in Hispanic objects resulting in historical archaeology being introduced to Mesoamerica may be seen in the work of John Goggin (1968). Goggin carried out a major comparative study of majolica, a ceramic ware of Hispanic origin and New World production, which appeared in Hispanic sites in the United States. As a collectible art work majolica had long been the subject of studies in the United States, especially by the Hispanic Society of America (e.g., Barber, 1908, 1911). Goggin (1968:5–15) pointed out that similar studies had been carried out on majolica in Spain

and in Mexico, but that in Mexico as a whole there was little interest in Colonial archaeology.

Goggin carried out archaeological investigations in Mesoamerica in 1951 as part of his study, focusing on the Basin of Mexico and adjacent Puebla in the central highlands with excursions to the states of Oaxaca, Michoacan, and Hidalgo (Goggin, 1968:50–51). The field research concentrated on Colonial structures, usually churches and their residential complexes, with surface collections and, in some cases, stratigraphic excavations (Goggin, 1968:93–101). In addition, Goggin had access to public and private collections of majolica (Goggin, 1968:ix). All research was conducted through the Instituto Nacional de Antropología e Historia (INAH).

Some Mexican scholars were beginning to publish on Colonial period ceramics. Eduardo Noguera had encountered and identified historical-period ceramics during his research into the ceramics of the Prehispanic Templo Mayor in Mexico City (1934). Barlow (1946) discussed Colonial figurines in museum collections. DuSolier (1949) and Franco (1949) both described some Colonial period Aztec ceramics. Barlow (1951) published one of the few Colonial period codices that described ceramics (Cuauhtitlan). Nevertheless, Goggin's research would appear to be the first definitive historical archaeological fieldwork project designed to recover, through surface reconnaissance, surface collections, and stratigraphic excavations, Colonial and Independence period materials in Mesoamerica west and north of the Maya area.

Contributions of American and Mexican Restoration and Salvage Archaeology

Several developments in the 1960s came together to form a second major factor in influencing the development of historical archaeology in Mesoamerica. Previous influences were related to the priority of lay and scholarly interests in the Hispanic legacy in the United States, such interests being crucial to the formation of historical archaeology there.

Following its initial development, historical archaeology in the United States became more widespread and better supported financially after World War II (e.g., Goggin, 1968) when it and prehistoric archaeology were included as necessary studies to be implemented whenever building restoration, demolition, new construction, and earthmoving activities might affect historical and indigenous archaeological deposits and structures in the 1960s.

An analogous development occurred in Mexico. In Mesoamerica (outside the Maya area) as well as in the northern Mexican borderlands, historical-period buildings, particularly religious buildings including churches, missions, monasteries, and convents, whose titles are all held by Mexico, had been maintained and restored with scant attention paid to the archaeological materials encountered during these activities before the 1960s. In some cases, such as that of the Augustinian Monastery at Calvario Acolman in the Teotihuacan Valley and a similar complex at Tepeapulco to the northeast, historical-period ceramics, presumably found during restoration, had been placed on display.

Pioneering work in historical archaeology was carried out in Michoacan and in the Metropolitan Cathedral in Mexico City in the 1960s (Peña, 1988), followed by intensive archaeological projects associated with major construction activities (Arana and Cepeda, 1969; Fournier and Miranda, 1992). By 1972, Mexican law required that archaeologists be present when such activities were being conducted to protect any indigenous and historical remains encountered.

Contributions of Problem-Oriented Prehispanic Archaeology

A third source for the origins of historical archaeology in Mesoamerica outside of the Maya region is to be found in the inclusion of archaeological data from post–1521 C.E. by archaeologists whose primary interests previously were solely in Prehispanic civilizations. They realized in the 1960s that archaeologists no longer needed to leave the study of the Colonial and later periods to the historians and ethnohistorians, as scholars such as Gamio (1922) had done in his study of the Teotihuacan Valley from its earliest times to the 1920s. The field methods used for the investigations of Prehispanic civilizations worked equally well for the archaeology of the post–1521 C.E. historical periods.

These included surface survey with and without surface collections and excavations of strata pits and of structures and domestic middens.

In 1966, Charlton (1969) initiated a survey and excavation project designed to continue and complete the archaeological sequence in the Teotihuacan Valley from the Late Aztec period, the chronological terminus of Sanders' Teotihuacan Valley Project (Sanders, 1965), up to the present (Charlton, 1973). At the same time, Ronald Spores started the Nochixtlan Valley Project (Spores, 1972, 1974) that combined, in effect, a complete study of the Prehispanic periods and continuing through the Postconquest periods to the present. These studies had been influenced by the development of historical archaeology in the United States, by the development of processual archaeology, by the settlement pattern approach, and by familiarity with the relevant available documents, published and unpublished.

Institutional Contexts of Mesoamerican Historical Archaeology

Historical archaeology in Mexican Mesoamerica is carried out by investigators with diverse institutional affiliations. Those affiliated with INAH in Mexico City and in INAH regional offices throughout the country are responsible for salvage investigations as mandated by law. These data have been used to address questions of contact, acculturation, the structure of social systems, social identities, social meanings, as well as the politics and economics of the Colonial and Independence periods. Similar questions are raised by academically situated archaeologists, whether domestic or foreign, on regular or salvage projects. Such studies provide material correlates to the documentary record (e.g., Fournier, 1990, in Mexico City).

Historical Archaeology in Mesoamerica: 1960s to the Present

Historical archaeology is a relatively young but extremely vital subdiscipline. As practiced in Mesoamerica today it retains many characteristics derived from the diversity of its origins. There is no uniform set of problems to be resolved or sets of data to be recovered. The subject matter and the questions asked by Mesoamerican historical archaeologists are like those of historical archaeology elsewhere (Charlton and Fournier, 2008; Fernández Dávila and Gómez Serafín, 1998a; Fournier and Miranda, 1992; Hernández Pons, 1998). In the following sections, we describe some of the main characteristics of such studies since the 1960s. Most investigations involve multiple foci and goals, and although we categorize them, we do not intend to imply that any one is restricted to the category or categories we use.

Ceramics in Central Mexico: Recognition and Chronological Importance

Artifactual studies reflecting the temporal, ethnic, economic, and social dimensions of the post–1492 C.E. cultures of diverse origins are ubiquitous throughout the New World. Among those artifacts are the ceramic assemblages of the indigenous cultures, the intrusive cultures, and the new syncretic cultures of Mesoamerica. Eduardo Noguera's (1934) prescient study described Colonial period ceramics, both glazed and unglazed, from excavations near the Aztec Templo Mayor in Mexico City. Vaillant (1944) and Tolstoy (1958) recognized the possibility of Postconquest ceramics in their collections, but usually with reference to glazed ceramics. The unglazed materials were lumped with Aztec ceramics and the glazed, without evidence of indigenous form or design, with the materials of the twentieth century (Charlton, 1972), thus effectively eliminating the Colonial and Independence period occupations.

Goggin's (1968) venture in the 1950s into Mesoamerican historical archaeology was in pursuit of dated or datable sequences of ceramics (majolicas) to be used to date the occupations in Hispanic sites within the United States and elsewhere. Although he describes the categories of glazed earthenwares and unglazed ceramics found, he was primarily interested in developing a chronologically arranged set of majolica styles that could be used as "index fossils" to date the Hispanic presence

in the mainly mission sites in the Borderlands within the United States. He was not interested in developing a central Mexican sequence, but rather in documenting the Postconquest Hispanic introduction of, and later developments in, the majolica tradition, an Old World type.

Developing research in Mesoamerican historical archaeology in the 1960s, Charlton came from a different direction. He and Charles Fletcher had participated in William Sanders' Teotihuacan Valley Project (Sanders, 1965) in the early 1960s, and thus knew that the Prehispanic ceramic sequence had been critical for the project that used broad areas of settlement pattern surveys identifying occupations through the diagnostic ceramics found on them. They had seen very little evidence of Colonial-introduced changes in the then-defined Late Aztec ceramic complex. Jeffrey Parsons's (1966) dissertation defining the Aztec ceramic sequence also noted the lack of information on this sequence, but made some perceptive suggestions based on his survey experience.

This was distinctly odd since most communities remained occupied until 1603–1620 C.E. even as the population plummeted (Seifert, 1977). The absence of sixteenth-century majolica from Spain or from sixteenth-century Mexican production was noted by Goggin (1968:98) in sites he examined Central Mexico. The studies by Lister and Lister (1982) on majolica from the Metropolitan Cathedral in Mexico City and ours on ceramics from Cortés's Palace in Cuernavaca (Charlton et al., 1987) did record sixteenth-century majolicas of Peninsular and Mexican origins. Continued work in the Otumba city-state (Charlton and Otis Charlton, 1998) located small quantities of sixteenth-century glazed earthenwares, late-sixteenth-century oriental porcelains and majolicas, and Aztec IV Black-on-Orange, a Colonial period development, all in good contexts.

In 1966 (with Charles Fletcher) and 1967, when Charlton initiated his investigations into Postconquest archaeology in the Basin of Mexico, he approached it from the point of view of determining changes within the ceramic complex in indigenous communities starting with the known Late Aztec period ceramics. Gónzalez Rul (1988) took a similar approach at about the same time in his research at Tlatelolco. Charlton and Charles Fletcher in 1966 initially carried out surveys with surface collections in Colonial period religious sites similar to those of John Goggin 15 years earlier. Charlton (1968) added resurveys and collections from Late Aztec period sites known from archaeological surveys and documents in the Basin of Mexico, and in 1967, also visited sites and museums in New Mexico and Arizona to determine the extent to which datable ceramic complexes had been identified in the Borderlands.

In 1968, after determining that there was no extant body of knowledge on Basin of Mexico Postconquest archaeology apart from materials inadvertently encountered in salvage operations, Charlton initiated the Postconquest Developments in the Teotihuacan Valley Project (Charlton, 1973). Fieldwork involving excavations and survey collections in the 1968 and 1969 field seasons recovered substantial amounts of ceramics dating from the late Aztec period to 1969. A general Postconquest ceramic sequence for the eastern Teotihuacan Valley was formulated using indigenous, modified indigenous, European, modified European, and modern ceramics (Charlton, 1972, 1973, 1975, 1976, 1979, 1980, 1996). Similar chronologies using numerous ceramic wares as above have been proposed for Tlaxcala and Puebla (Müller, 1981), Oaxaca (Gómez Serafín and Fernández Dávila, 2005), and for Mexico City (Aguirre, 1997; Beristáin Bravo, 1988; Charlton et al., 2006; Gónzalez Rul, 1988; López Cervantes, 1976, 1982).

In addition to the above general syntheses of regional ceramic sequences making use of a number of ceramic wares, there have been studies focusing on specific ceramic wares of the Postconquest sequence in the Teotihuacan Valley, Mexico City, the surrounding Basin of Mexico, and other areas of Central Mexico, primarily in urban contexts. In the Teotihuacan Valley some detailed studies have been carried out on majolica (Seifert, 1975, 1977) and whiteware (Borg, 1975). Seifert's work defined the central Mexican majolica complex for the nineteenth century. Other majolica studies include those of Lister and Lister (1978, 1982) in Mexico City, ours at the Templo Mayor and Tlatelolco (Fournier 1998; Fournier and Charlton, 1998) and the Palacio de Cortés in Cuernavaca (Fig. 2) (Charlton et al., 1987), and those in Spain (Lister and Lister, 1987). In addition, majolica was also studied in Puebla (Aguirre et al.,

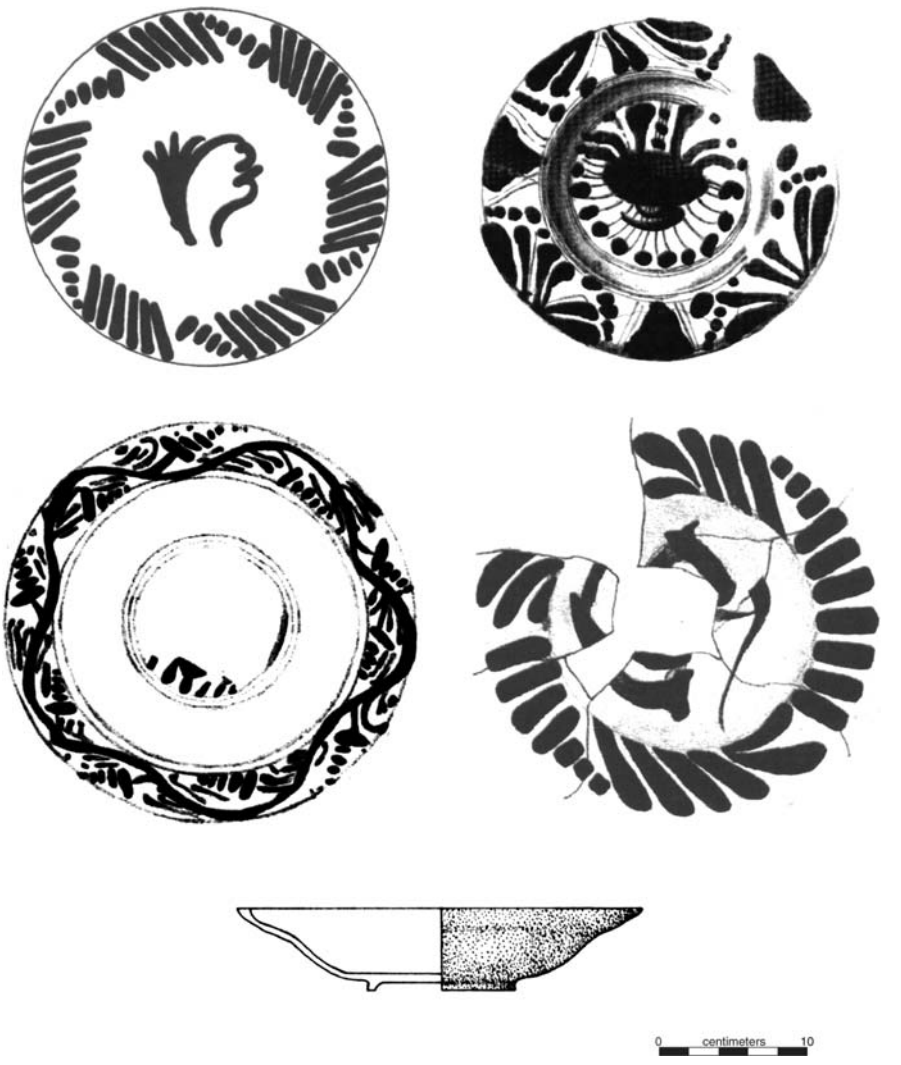

Fig. 2 Early Colonial period majolica plates from Tlatelolco. From *left* to *right*, *top* to *bottom*: Mexico City Blue on Cream, San Luis Polychrome, La Traza Polychrome, Mexico City Green on Cream, general plate vessel form (illustrations by Carolina Chairez)

1996–1997), Guanajuato (Castañeda et al., 2002; Cohen-Williams, 1992), Sayula (Schöndube, 1989), and Oaxaca (Gómez Serafín and Fernández Dávila, 1998a). Fournier and Charlton (1998) present a general overview of archaeological majolicas in Mexico.

European and Oriental ceramics including porcelains and whiteware from the ex-Convento of San Jerónimo in the Mexico City were studied by Fournier (1987, 1990), while majolicas from the same site were treated in the B.A. thesis of M.S. Corcuera (1987). Glazed earthenwares, the ubiquitous and most abundant type of ceramic, with a technique of glazing transmitted quite early to indigenous potters, have also been studied, both with reference to the transfer of the techniques of glazing and wheel-throwing as well as a series of new forms (Fig. 3) (López Palacios, 1990, 1998; Sodi, 1994). Porcelains from Europe and Asia found in Mexico City were studied by López Cervantes (1974, 1977) and Fournier (1990), and those in the former convent of Santo Domingo (Oaxaca) by Gómez Serafín (1994).

A number of studies include information on the changes occurring in the decorated indigenous ceramics in the Basin of Mexico (Fig. 4). Decorated wares include the Black-on-Orange and Red Ware ceramics within the Aztec ceramic tradition. Research at Otumba (Charlton and Otis Charlton,

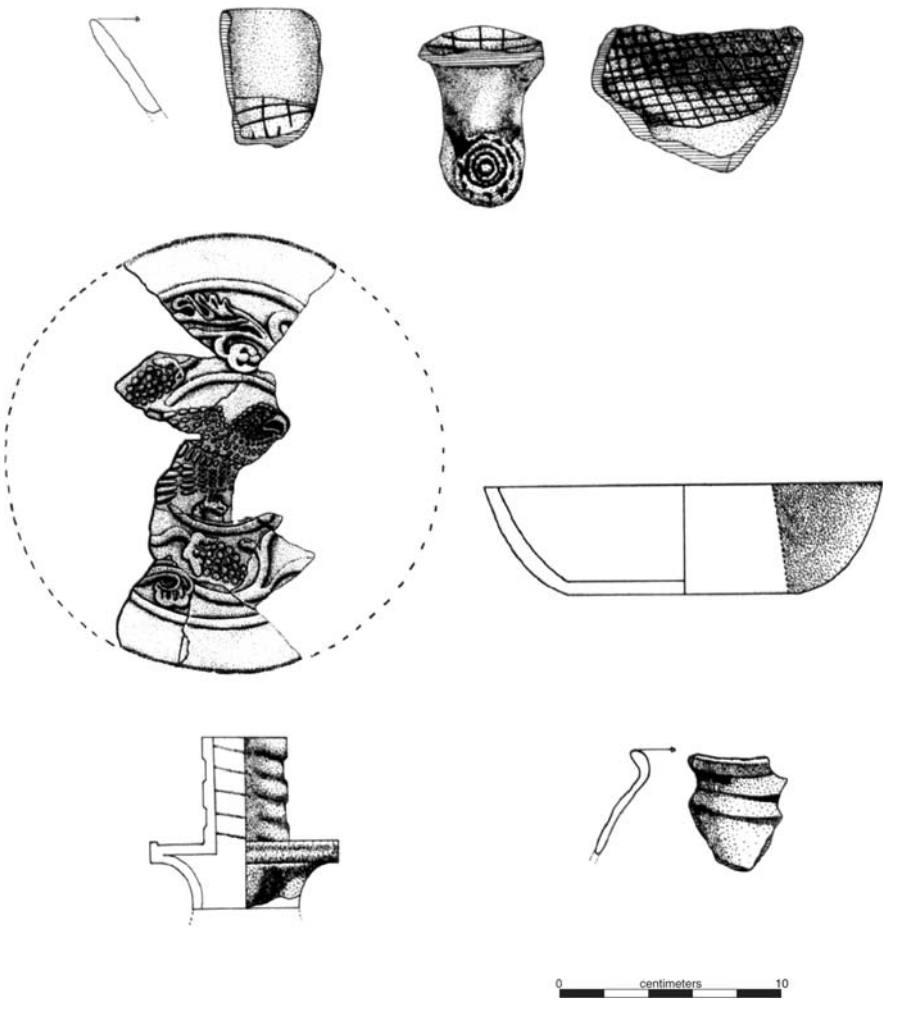

Fig. 3 Colonial glazed wares from the Templo Mayor and Tlatelolco collections. From *left* to *right*, *top* to *bottom*: fragments of tripod grinding bowls (*molcajetes*); stamped bowl (*cajete*), pattern with an eagle and bowl form; fragments of a wheel-thrown candle holder and an olla (illustrations by Carolina Chiarez)

1998) confirmed the Postconquest presence of monochrome glazed earthenwares with Aztec IV Black-on-Orange ceramics (see Fig. 3). Similarly the study of a sixteenth-century Colonial period obsidian workshop at the Cerro de las Navajas obsidian source (Fournier et al., 1998; Pastrana and Fournier, 1998) supported this chronological placement of the style. Changes in the *molcajete*, an indigenous tripod grinding bowl form, have been studied by Temple Sánchez (1998a).

Aztec Red Ware has also been studied in the Basin of Mexico, both rural and urban occurrences (Fig. 5) (Barlow, 1951; Charlton, 1996; Charlton and Fournier, 1993; Charlton et al., 1995; López Cervantes, 1976; Pastrana and Fournier, 1998, Rodríguez-Alegría, 2003, 2005a, 2005b), as well as in Puebla and Tlaxcala (Müller, 1973, 1981) and in Cuernavaca (Charlton et al., 1987). The current data indicate that these changes occurred much earlier in urban contexts (Charlton and Fournier, 1993).

Another example of the study of the chronology and function of a still enigmatic ceramic type introduced during the Colonial period, primarily, although not exclusively, an urban phenomenon, is the unglazed and generally poorly finished *lebrillo* (a deep-sided dish) with a stamped interior base (Hernández Pons et al., 1988; Temple Sánchez, 1998b). The form is not a Preconquest indigenous form, but is made on a mold with a ring of clay being added and worked by hand to form the upper rim.

Obviously there is a persistent interest in the development of chronologies of Postconquest ceramics, whether individually or as part of changing complexes. These interests are particularly

Fig. 4 Early Colonial period Late Aztec Black-on-Orange IV tripod grinding bowls (*molcajetes*) from Tlatelolco and Juarez Avenue 70 (Alameda) collections (illustrations by Francisco C. Ramírez and Cuauhtemoc Domínguez)

noted for Hispanic-introduced wares and technologies and for imported wares from Europe and Asia. Given the extremely mixed contexts in urban archaeology, such studies are vital in determining the occupations represented. Other emphases are on persistence and changes in the indigenous wares. Some studies on ceramic manufacturing technology and styles of the period have also

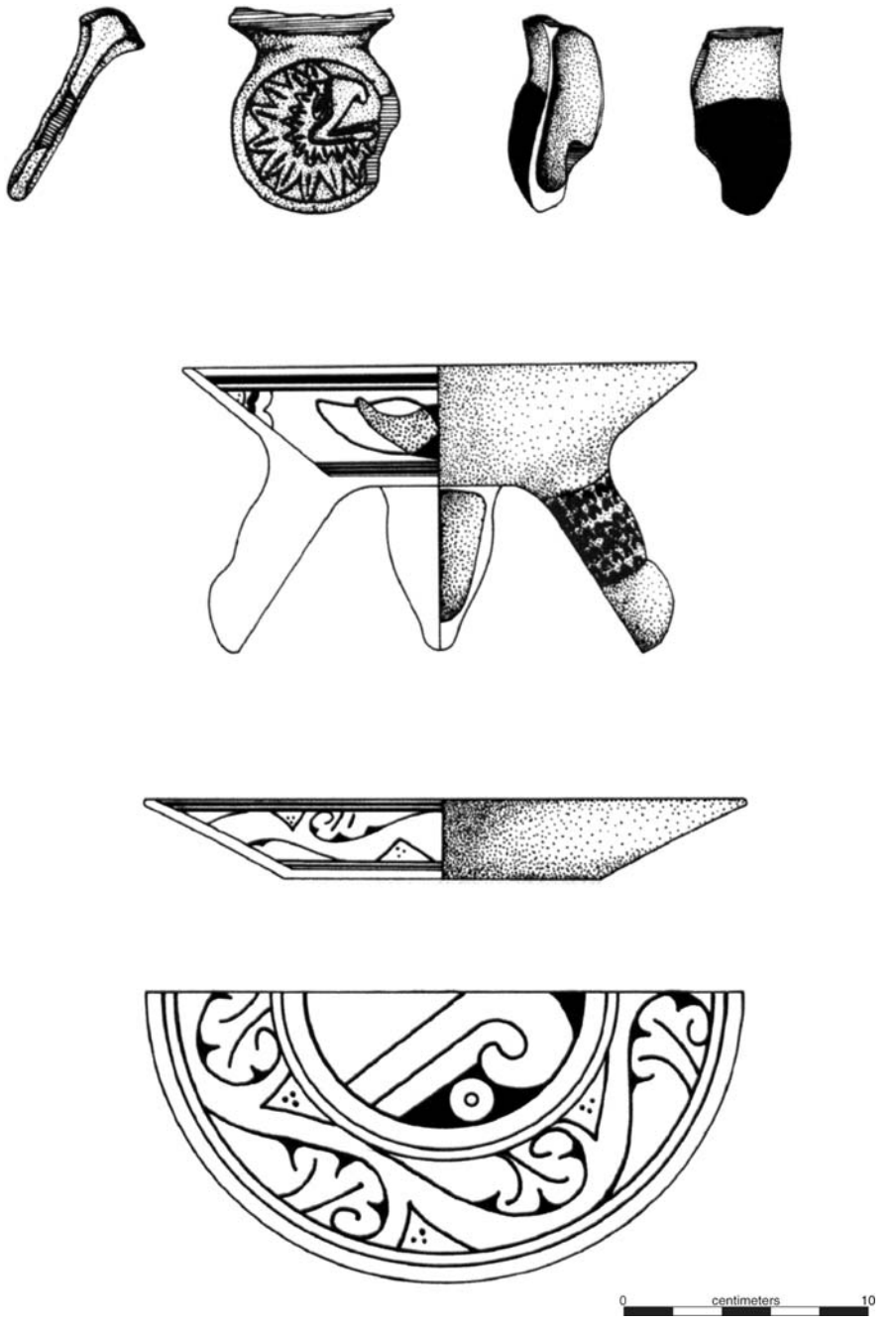

Fig. 5 Early Colonial period Black-on-Red ceramics from Tlatelolco (illustrations by Carolina Chairez)

been undertaken (Charlton and Reiff Katz, 1979; Gómez Serafín and Fernández Dávila, 1998b). In the far northwest of Mesoamerica in the state of Sonora, a local ceramic sequence has also been developed using a broad series of ceramics (Fournier and Fournier, 1992).

Ceramic Studies—Ethnic, Social, Economic, and Political Queries

Studies of ceramics of the periods from 1521 C.E. to the present that attempt to define traditional type and complex categories with reference to

chronological refinements continue to be pursued actively, and rightly so. However, Mesoamerican historical archaeology continues to be linked with developments in archaeology in general. There, as elsewhere, the development of absolute dating techniques since 1945 C.E. has meant that the elaborate ceramic typologies do not bear the weight of chronology alone. Instead, where applicable, radiocarbon and obsidian hydration dating techniques have also been used and have been complemented with dates derived from historical documentation on architectural contexts and on dates of ceramic manufacture derived from factory production information (e.g., Fournier, 1990).

As a result, Mesoamerican historical archaeologists, like archaeologists focusing on other times and places, have developed interests in questions relating to broader sociocultural interpretations using the spatial and chronological distribution of materials, especially ceramic types. Blackman et al. (2006), Charlton (1980, 1986), Charlton and Fournier (1993), Charlton and Nichols (1992), Charlton et al. (2005), Fournier (2004), Fournier and Charlton (1996, 1996–1997), and Fournier et al. (2007) have examined the relations of changes in material culture, especially ceramics, as a means of examining the higher-level social, economic, and political changes after the conquest.

In addition to this, there have been suggestions that ethnicity can be recognized through the differential distribution of wares loaded with symbolic importance. Seifert (1977) suggested that the distribution of majolicas in rural areas might reflect the class to which they belonged. Fournier (1997) has used the symbolic significance of ceramics during the Early Colonial period to explore the interrelations of indigenous peoples and Spaniards in the Basin of Mexico. At the same time, working with household ceramic complexes in sixteenth-century Tenochtitlan, Rodríguez-Alegría (2003, 2005a, 2005b) has addressed the relationships between material culture, power, and ideologies.

Recently, instrumental neutron activation analyses (INAA) have been applied to ceramics of the Late Postclassic, Colonial, and Independence periods. The Escuela Nacional de Antropología e Historia (Fournier) and the Smithsonian Institution (Bishop and Blackman) have collaborated in a project focusing on the sources of raw materials used in majolica and glazed earthenware production in New Spain (Blackman et al., 2006; Fournier and Blackman, 2007; Fournier et al., 2007). This research is contributing to an understanding of ceramic manufacturing technologies along with the sequence of processes used and the contexts of manufacturing, use, and distribution. Such detailed information on ceramics in New Spain provides a greater understanding of the dynamics of colonialism including agency and the development of local social and political structures.

Other INAA studies have been carried out in Mexico with a focus on majolica glazes and paste composition (Monroy-Guzmán and Fournier, 2003; Monroy-Guzmán et al., 2005). Rodríguez-Alegría (2003), working with Matos Moctezuma (2003) and Neff and Glascock (Rodríguez-Alegría et al., 2003), has applied INAA to majolicas, colonial red wares, and Romita Sgraffito sherds (Fig. 6). Finally, Charlton et al. (1999) have determined that after the destruction of Tenochtitlan in 1521 C.E., the production of Aztec Orange wares, including Aztec IV Black-on-Orange, shifts from the Tenochtitlan production zone to the east side of the lake using clays of the Texcoco production zone, presumably as a result of the damage done to indigenous ceramic-production facilities during the conquest.

Religious Buildings: Convents, Monasteries, Churches, and Chapels

Within the sections of Mexican Mesoamerica treated here, major programs of architectural restoration have been undertaken during the last four decades. Unfortunately, historical archaeological research priorities have tended to be subordinated to the rehabilitation of buildings by architects. The work on historical-period religious buildings had as its aim the development of tourist attractions or the reuse of the renovated structures as universities, cultural centers, and museums. Most historical archaeological studies have dealt with human burials and, in some cases, ceramics and other artifacts.

Examples of restoration-related projects dealing with religious buildings include that of the convent of San Jerónimo in Mexico City (Carrasco, 1990; Fournier, 1990; Juárez Cossio, 1989; Mansilla, 1994; Mansilla et al., 1992, 2000; Martínez et al., 2002). This was the first major historical archaeological project in Mexico. Others include the Encarnación convent (Salas, 1995, 1996, 2004, 2006), the convent and

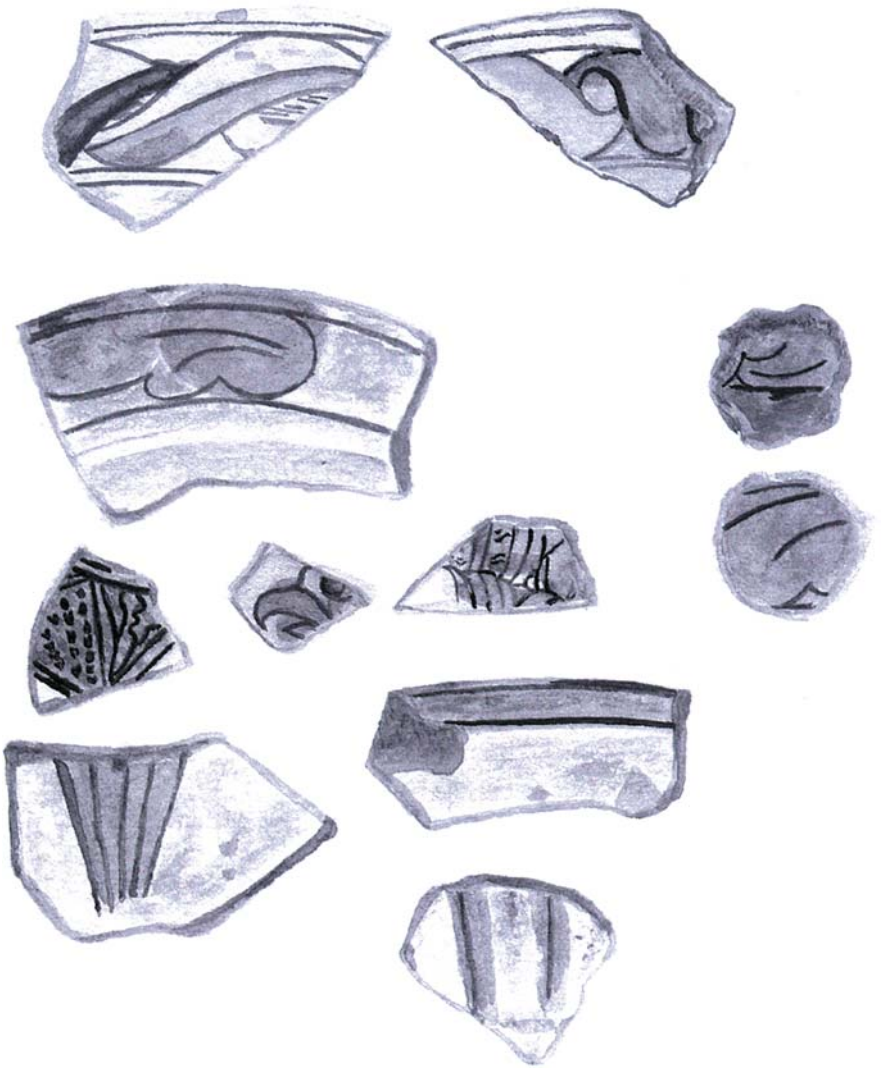

Fig. 6 Early Colonial period Romita Sgrafitto pseudomajolica vessel fragments, Templo Mayor collections (illustrations by Felix Domínguez)

Church of Santa Teresa la Antigua, the Betlemitas monastery (Hernández Pons et al., 1998), the first Cathedral of Mexico City (Peña, 1988; Hernández Pons, 1998), the monastery of Santo Domingo (Santa Cruz et al., 1996), and the convent of Santa Isabel (Escobedo et al., 1995), all in Mexico City.

Others would include the monasteries of San Francisco and Huejotzingo, both in the state of Puebla (Aguirre et al., 1996–1997; Cedillo Ortega, 1998; Córdova Tello, 1992; Vázquez, 2000) and the Chapel of Aranzazu in San Luis Potosí (López Cervantes, 1991). In two cases, the Dominican Temple of Osumacinta (Beristáin Bravo, 1996) in Chiapas and the monastery of Santo Domingo de Guzmán in Oaxaca (Fernández Dávila and Gómez Serafín, 1998a, 1998b, 1998c, 1998d; Gómez Serafín, 1994, 1997; Gómez Serafín and Fernández Dávila, 1998a, 1998b, 2005), detailed studies of the architecture and the artifacts were produced.

The latter project developed after 1987 when UNESCO declared the historic city of Oaxaca one of the world's Cultural Heritage sites. In 1993, the former monastery of Santo Domingo, as well as the adjacent lots, was turned over by the Mexican National Army to the State Government of Oaxaca. Subsequently, major restoration and reconstruction were carried out under the direct supervision of architects. The excavations were carried

out from 1994 to 1997 in different sectors of the architectural complex.

The archaeological excavations recovered more than 50 tons of sherds of local and foreign manufacture. They consisted of lead-glazed earthenwares, burnished unglazed red ceramics of uncertain origins, Oriental porcelains, Tonala burnished ceramics from Jalisco (Charlton and Reiff Katz, 1979), and majolica from Spain, Puebla, and Oaxaca. A Spanish-style kiln was excavated in the former monastery garden, suggesting that pottery may have been produced there during the Colonial period. Other important features recorded include a lime kiln and water-supply networks (Fernández Dávila and Gómez Serafín, 1998a, 1998b; Gómez Serafín, 1994, 1997; Gómez Serafín and Fernández Dávila, 1998a, 1998b, 2005).

The thorough historical archaeological investigations at this site provided information essential for an understanding of the architectural history of the complex. They also documented in detail Oaxacan majolica production. Finally, the materials can be used to interpret consumption trends through the Colonial and Independence periods in Oaxaca.

Secular Buildings: Government, Medical, Residential, Ranchos, and Haciendas

Historical archaeological projects have also been incorporated into the renovation and conservation of buildings with a secular function. Often such proposed reuse of Colonial or Independence period buildings includes government offices, banks, and museums.

In Mexico City, such studies have dealt with the National Palace (Besso-Oberto, 1996; Montúfar, 2003; Pérez and Corona 1995, 1997, 1998; Pérez et al., 1997); Hospital Real de los Naturales (Cabrera and García, 1997; Meza and Báez, 1994; Meza and Ortuño, 1995); the Colonial period Hospital de Amor de Dios which, during the Late Colonial period, housed the San Carlos Academy of Fine Arts (Eleazar, 1996); the Casa del Marqués del Apartado (Hernández Pons, 1998); the excavation of Colonial period houses in the Historic Center of Mexico City (Matos Moctezuma, 2003); the Chapultepec Castle (Armijo, 2005; Moreno, 2000); and the Monument at the Molino del Rey commemorating the Mexican heros of the Mexican–American war (Salas, 1988).

The most important project that includes many secular buildings is the Urban Archaeology Program (PAU) in Mexico City directed by Matos Moctezuma (1993). This project started in 1991 as a long-term investigation within the Historic Center of Mexico City. Salvage archaeology has long been a priority in areas near the Aztec Templo Mayor. These projects were directed to recover as much information as possible from Late Postclassic and Historic period structures. Both excavations and analyses of the materials recovered have been carried out and reported (Matos Moctezuma, 2003). Those preliminary results contribute to an understanding of the development of Mexico City as a major center, the processes of urbanization in play, cultural landscapes, acculturation, and consumption trends from the sixteenth to the twentieth century.

Regional Studies: The Soconusco, the Isthmus of Tehuantepec, the Nochixtlan Valley, the Chontalpa, the Teotihuacan Valley, and the Valle del Mezquital

Regional as opposed to site-specific archaeology has been conducted in several areas of Mesoamerica. These studies usually include a settlement pattern component and selected excavations. Through such studies we gain a better understanding of landscape and settlement patterns as well as insights into the impact of the conquest on the indigenous people. Such studies include, but are not restricted to, indigenous towns, intrusive missions, churches, ranchos, and haciendas. Documentary studies are tightly integrated with the archaeological problems and data.

Examples of such studies include that of Gasco (1993, 1996b), who studied an area of the Soconusco with the intention of delineating details of Postconquest economic changes in that region during the Colonial period. This study represents one in which the Postconquest studies are a logical extension of the Preconquest archaeology (Voorhies and Gasco, 2004). Zeitlin's study of the Postcontact Zapotec on

the nearby Isthmus of Tehuantepec (Zeitlin, 2005) also began with Prehispanic surveys and excavations that were then complemented with documentary studies and archaeology in historical-period sites.

The research of Spores (1972, 1974) in the Nochixtlan Valley developed a prehistoric sequence for the Valley and then extended it into the Colonial period. Currently, Zborover (2005) is working in the Chontalpa region of Oaxaca studying documentary, oral, and archaeological data. He is focused on the Late Postclassic period and the Early Colonial period and attempting to define the social, political, and economic relations between the indigenous people and the conquering society.

In the Teotihuacan Valley, Charlton extended Sanders' surveys and excavations of the Prehispanic period through the Colonial and Independence periods to 1969 (Charlton, 1973, 1986). Aspects of contact, acculturation, demographic collapse, economics, and the development of ranchos and haciendas were included. Documents play a critical role.

In the Mezquital Valley in the state of Hidalgo, Fournier and her colleagues are currently conducting an integrated study on the construction of indigenous identity and resistance. Through the use of documents and regional archaeological surveys, historical archaeology has been employed (e.g., Fournier, 1996). The impact of the Colonial conquest and domination on the way of life of the Otomí people in this area is being documented, as well as the effects of intrusive economic systems marked by ranchos and haciendas (Charlton and Fournier, 1993; Fournier and Mondragón, 1993; Mondragón et al., 1997).

A Brief Commentary

There is an active and productive practice in those regions of Mesoamerica dealt with here. A substantial amount of such research is carried out in salvage situations, such as building the Metro in Mexico City or restoring and refurbishing old buildings for other uses. Yet, those involved in salvage historical archaeology have been resourceful and innovative, making productive use of the materials available.

In areas where some semblance of Colonial and Independence period cultural landscape persists, the total potential of a multifaceted historical archaeology can be exploited. The richness of the archaeological record, the historical documentation, and the presence of the descendants of both indigenous and intrusive societies in many instances mean that an enhanced study of social and cultural practices within many differing contexts is possible. Historical archaeologists build on the work of their colleagues who focus on the Prehispanic cultures of the regions studied. They extend those studies into the last half millennium to the present, integrating documentary and ethnographic information with the archaeological data, and use the results to investigate anthropologically based questions about cultural development and adaptation.

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Historical Archaeology in Yucatan and Central America

William R. Fowler

Introduction

This essay attempts to summarize some of the recent trends and developments in the historical archaeology of Yucatan and Central America. The area of Yucatan, as defined here, encompasses the entire Yucatan Peninsula, including the Mexican states of Campeche and Yucatán, the territory of Quintana Roo, the republic of Belize, and the department of El Petén in Guatemala (hence, the northern and southern Maya lowlands). The area of Central America, as used here, includes highland Chiapas (Soconusco is covered in the chapter by Charlton and Fournier) and the republics of Belize, Guatemala, El Salvador, Honduras, Nicaragua, and Panama. Due to limitations on length, this cannot be a comprehensive survey of published research. It should be regarded, at best, as a selective and somewhat idiosyncratic summary of some of the more interesting recent research in historical archaeology in Yucatan and Central America.

At the outset, it should be noted that historical archaeology as a separately recognized discipline barely exists in Mexico and Central America. With few if any exceptions, practioners of historical archaeology working in Yucatan and Central America received their training as anthropological archaeologists. Most combine active research interests and fieldwork on Precolumbian indigenous sites, ethnohistory, and ethnoarchaeology with archaeological and historical work on contact-period and Spanish colonial sites. Many of these practitioners would not even consciously self-identify as historical archaeologists. Most would probably accept Deetz's (1991:1) definition of historical archaeology as "the archaeology of the spread of European societies worldwide, beginning in the fifteenth century, and their subsequent development and impact on native peoples in all parts of the world" (Deetz, 1977:5) Most would also accept the injunction of Leone and Potter (1988:19) that "whether or not historical archaeology is to be an archaeology of the emergence and development of capitalism has been settled in the affirmative. There never has been a choice even for those who were indifferent or hostile to the issue." Yet, because of their holistic training and their interests in Precolumbian as well as Postcolumbian cultures, historical archaeologists working in Yucatan and Central America have a natural predisposition to accept the position advocated recently by a number of historical archaeologists working in North America that we must study the articulation of global-scale and local processes and the entanglement of European and indigenous processes (Alexander and Kepecs, 2005; Lightfoot, 1995; Paynter, 2000a, 2000b; Rubertone, 2000; Silliman, 2005). The schism in North America between prehistoric and historical archaeology that prompted these prescriptive comments simply does not exist among specialists in Mexico and Central America.

Historical Background

As Patterson (1993:350–351) has pointed out, the first Spanish expeditions to the Americas were commercial ventures. The political-economic events in

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Spain during the fifteenth century form the historical antecedents of the sixteenth-century expansion of Spain in America. Among these events were (1) the decline of the Mediterranean economies of Catalonia and Aragón and the emergence of Genoa as a major commercial center; (2) the growth of wool production in Castille and export to textile factories in Flanders; (3) the expansion of shipbuilding on the north coast of Spain; (4) the marriage of Isabella and Ferdinand, which linked the strategic interests of two major dynastic states; (5) the 1488–1492 civil war in Granada, the last Moorish state on the Iberian peninsula; and (6) Castile's demand for sources of raw materials, slave labor, and manufactured goods. Elliott (1963) and Ruiz (2001) have analyzed these factors in considerable detail.

The indigenous societies of Central America that the Spaniards encountered in the sixteenth century included Mayas from Yucatan to highland Guatemala and western Honduras; Nahuas and Xincas in southeastern Pacific Guatemala; Nahuas and Lencas in El Salvador; Nahuas, Lencas, and Jicaques in western Honduras; Nahuas, Chorotegas, and Subtiabas in western Nicaragua; and Misumalpan and Chibchan groups from eastern Honduras to eastern Nicaragua, Costa Rica, and Panama (Fowler, 1989a, 1989b; Helms, 1976; Ibarra Rojas, 1990; Lara Pinto, 1996:101–139; Stone, 1966:210–214; Weeks et al., 1987). Political integration ranged from small village-level societies to chiefdoms and city-states.

Historical overviews of the initial stages of European exploration, conquest, and colonization of Yucatan and Central America may be found in the works of many scholars. For Yucatan and Belize, the works of Chamberlain (1948), Farriss (1984), G. D. Jones (1989, 1998), Patch (1993), Roys (1972), and Scholes and Roys (1948) are fundamental, and Quezada (2001) provides a good summary. For Central America in general, the works of MacLeod (1973) and Sherman (1979) are indispensable. For Chiapas, the work of Markman (1984) is essential, and Zebadúa (1999) offers a good summary. For the full sweep of the conquest of Central America, Kramer et al. (1993) provide an excellent summary. Early colonial Guatemala is covered by O. L. Jones, Jr. (1994), Kramer (1994), Luján Muñoz and Cabezas Carcache (1994), Lutz (1994), Markman (1966), and Webre (1989). For El Salvador, the works of Barón Castro (1996), Chamberlain (1947), Escalante Arce (1992), and Lardé y Larín (2000) are most useful. For Honduras, the works of Chamberlain (1953) and Newson (1986) are essential. For Nicaragua, the works of Newson (1987), Radell (1969), and Werner (1996, 2000) are required reading. An excellent source on Costa Rica is Quirós Vargas (1990). Panama is amply covered by the works of Castillero Calvo (1972), Góngora (1962), Mena García (1992, 1998), Romoli (1953, 1987), and Sauer (1966).

Some historical perspective on the origins and development of historical archaeology in Yucatan and Central America is provided by Andrews (1981, 1984, 1985) and McKillop (2002). Andrews (2007) maintains a current website, *Historical Archaeology in the Maya Area: A Working Bibliography*. A perusal of this site reveals a wide range of interests from early urbanism and architecture, the early church, political economy, hacienda archaeology, industrial archaeology, subsistence, salt-making, underwater archaeology, and many other themes. In addition, Andrews and Corletta (1995) have published a survey of underwater archaeology in the Maya area that includes references to the historical period in Yucatan and Central America. Not to appear hortatory, but any reviewer of this corpus of literature would be remiss in not observing that the development of historical archaeology in Yucatan and Central America lags far behind that of its Precolumbian congener. Thus, I echo the sentiment of Rice and Rice (2005:140) that a fascination with exotic issues such as the so-called Classic Maya collapse and the structure and accomplishments of the great Classic-period, Precolumbian cultures of the area accounts in large part for the lack of attention paid to the massive culture changes that occurred from the Postclassic (A.D. 900–1519) into the Conquest and the Colonial period.

Topics and Sites

Landscape and Settlement

The concept of landscape as a means of studying settlement and the cultural modification of the spatial

environment has become very important in historical archaeology (Leone, 1984; Matthews, 2002a, 2002b; Mrozowski, 1991; Orser, 1996:137–157; Pauls, 2006). Anschuetz et al. (2001) suggest that the power of the "landscape paradigm" lies in its potential to connect patterns of human behavior with particular places and times. They outline four interrelated premises that provide the foundations for a landscape paradigm in archaeology: (1) landscapes are not synonymous with natural environments; (2) landscapes are worlds of cultural product (not merely the world we see and not the same as built environments); (3) landscapes are the arena for all of a community's activities; (4) landscapes are dynamic constructions, with each community and each generation imposing its own cognitive map on an anthropogenic world of interconnected morphology, arrangement, and coherent meaning (Anschuetz et al., 2001:160–161). Note that by these premises, especially the first one, the concept of cultural landscape is conflated with landscape in general: "Landscapes are synthetic, with cultural systems structuring and organizing peoples' interactions with their natural environments. Landscapes mediate between nature and culture" (Anschuetz et al., 2001:160).

In precisely defining landscape, Anschuetz et al. (2001:164) take as a point of departure the definition given by Sauer (1925:25):

> The cultural landscape is fashioned from a natural landscape by a culture group. Culture is the agent, the natural area is the medium, the cultural landscape is the result. Under the influence of a given culture, itself changing through time, the landscape undergoes development, passing through phases, and probably reaching ultimately the end of its cycle of development. With the introduction of a different—that is, alien—culture, a rejuvenation of the cultural landscape sets in, or a new landscape is superimposed on the remnants of an older one.

While this definition is certainly relevant to a broad conception of landscape, Sauer's latter point makes his definition especially apropos for historical archaeology.

The Spanish conquest of Yucatan and Central America resulted in the creation of highly structured cultural landscapes in which conquerors and conquered interacted, each bringing their own distinctive cultural attitudes and praxis into the organization and use of space. In research on both rural and urban landscapes in the historical period, we study the creation of the cultural landscape mediated by the dynamic interactions of its European and indigenous inhabitants. Of vital importance is the idea that cultural landscapes not only reflect the factors that led to their formation, but they are also spatial arenas in which social and physical relations are enacted (Anschuetz et al., 2001:161; Orser, 1996:138). In other words, we are dealing with socially constructed places and spaces, not just where certain actions and interactions occurred, but rather places and spaces with local and multiple constructions, culturally relative, and historically specific—multilocal and multivocal.

Rural Landscapes

Recent research by Sampeck (2007) provides an excellent illustration of the potential of the landscape paradigm for studying rural spatial relations in Central America. Focusing on changes and continuities in the archaeologically indicated use and experience of the landscape, Sampeck's primary research on the landscapes of the Izalcos region in western El Salvador is complemented by material culture analysis and historical research oriented toward the political economy and the place of Izalcos in the early Spanish colonial world-system. Colonial documents indicate that at the time of Spanish conquest in 1524, the Izalcos polity of Nahua-speaking Pipil, whose heartland lies in the Río Ceniza Valley of western El Salvador, was a thriving economic and political power (Fowler, 1991, 1993, 1994, 1995, 2006a; MacLeod, 1973:80–95). This region became a jewel in the Spanish Crown due in large part to its prodigious cacao production. Sampeck (2007) presents the results of an intensive regional survey, test excavations, lithic analysis, local and imported ceramic analysis, and transcription of a local archive in order to assess key elements of the Izalcos political economy before and after the Conquest. Her data show that the Pipils were central actors in Late Postclassic regional integration, which prepositioned the Izalcos region within the world genesis of capitalism and structured Spanish colonialism.

Sampeck evaluated each documentary, settlement, and artifactual data set separately for its

unique insights in order to provide different perspectives on the same processes of Izalcos political economy. Sixteenth- to nineteenth-century documents from a local municipal archive and other historical data present strong evidence that the Izalcos Pipils had typically Nahua social and political institutions that were inscribed on the landscape. For example, like all Nahuas and many other indigenous peoples of Mesoamerica, the predominant mode of political organization among the Izalcos Pipils was the *altepetl* or ethnic state (Lockhart, 1992:14–15). The Izalcos Pipil *altepetl* was centered on the region of Izalcos, with its four principal towns of Izalco, Caluco, Tacuscalco, and Nahuilingo, near Sonsonate. Lockhart (1992:436–438) emphasizes the cellular-modular nature of the *altepetl* and its tendency to create larger units by the aggregation of parts that remain relatively separate and independent. Archaeologically, this principle would be manifested on the ground by a tendency toward dispersed settlement with strong nucleation or centralization occurring only in complex, urban landscapes (Lockhart, 1992:19). These Nahua principles are demonstrated in inter- and intrasite organization and provide part of the logic for the distribution of Pipil settlement in Central America. This is also precisely the pattern that Sampeck (2007:232–257) finds in her Izalcos regional settlement survey: slight nucleation balanced by dispersion in late Preconquest times, contrasted with a tendency toward nucleation in Postconquest times, associated with the Spanish legal requirements of *reducción* (Fig. 1) (see Escalante Arce, 1992:1:22–23; Fowler, 1995:40; MacLeod, 1973:122). In addition to the role of Nahua cognitive principles in determining patterns of settlement before the Conquest, Sampeck (2007:232–233) also ascribes a significant role to the requirements of tending cacao orchards at the household level of production (see Fowler, 2006a).

Especially intriguing on a theoretical level is Sampeck's use of Upton's (1990) distinction between articulated and disarticulated landscapes. Specifically, Upton (1990:75) suggested that a disarticulated landscape may limit mobility for certain groups, while mobility may be enhanced in an articulated landscape that is flexible, dynamic, and continuous. An articulated, dynamic landscape cannot be comprehended at a glance. The observer is required to move through space and piece together many partial signals. It is the landscape that relates the parts in space and time (Upton, 1990:75). In a disarticulated conception,

> the landscape is an unrelated collection of barriers or pitfalls with no relation to any other part of the landscape; neutral points were simply forgotten. . . . [T]his kind of landscape, instead of being a network through which the observer moves, is a series of spots where customary social relationships are in effect, where control and possession are present, and where they are not (Upton, 1990:74).

Documentary evidence shows that in the Izalcos region, private ownership curtailed the Crown's survey efforts by thwarting survey expeditions so even among Spaniards a kind of disarticulated landscape existed. The emic view of the Izalcos Pipil landscape probably perceived it as more articulated in nature.

The other essential component for understanding Pipil settlement structure is their engagement in the expansive trade network that reached into central Mexico. Sampeck has shown that the Izalcos region's importance in long-distance trade was not diminished after the Spanish Conquest. Pipil concepts, institutions, and boundaries structured Spanish political and economic organization, nevertheless the Spanish rationalized the landscape so that wage labor emerged. This new local market of production, consumption, and speculation, however, was not easily molded by the preferences of a colonial state or even the world-system. The Manila galleon trade was a prime catalyst for Mexico to consolidate power by moving the route of New World trade across the isthmus, but the dispersal of porcelain and majolica in the Izalcos area suggests that contraband trade thwarted the Crown's efforts. In each phase, according to Sampeck, Izalco-centered interests exerted a gravity the world-system could not escape.

Another important application of the world-system framework, political economy, and regional settlement analysis is the research by Kepecs (2005) on salt production in Chikinchel, northern Yucatan. Here the focus is on changes from the Late Postclassic into the Early Colonial period. Kepecs (2005:133–136) finds little evidence of Spanish presence in the region during the sixteenth century and considerable evidence for active resistance by the Maya to Spanish domination, colonialism, and capitalism.

Rice and Rice (2005) have mapped sixteenth- and seventeenth-century Maya–Spanish interaction in

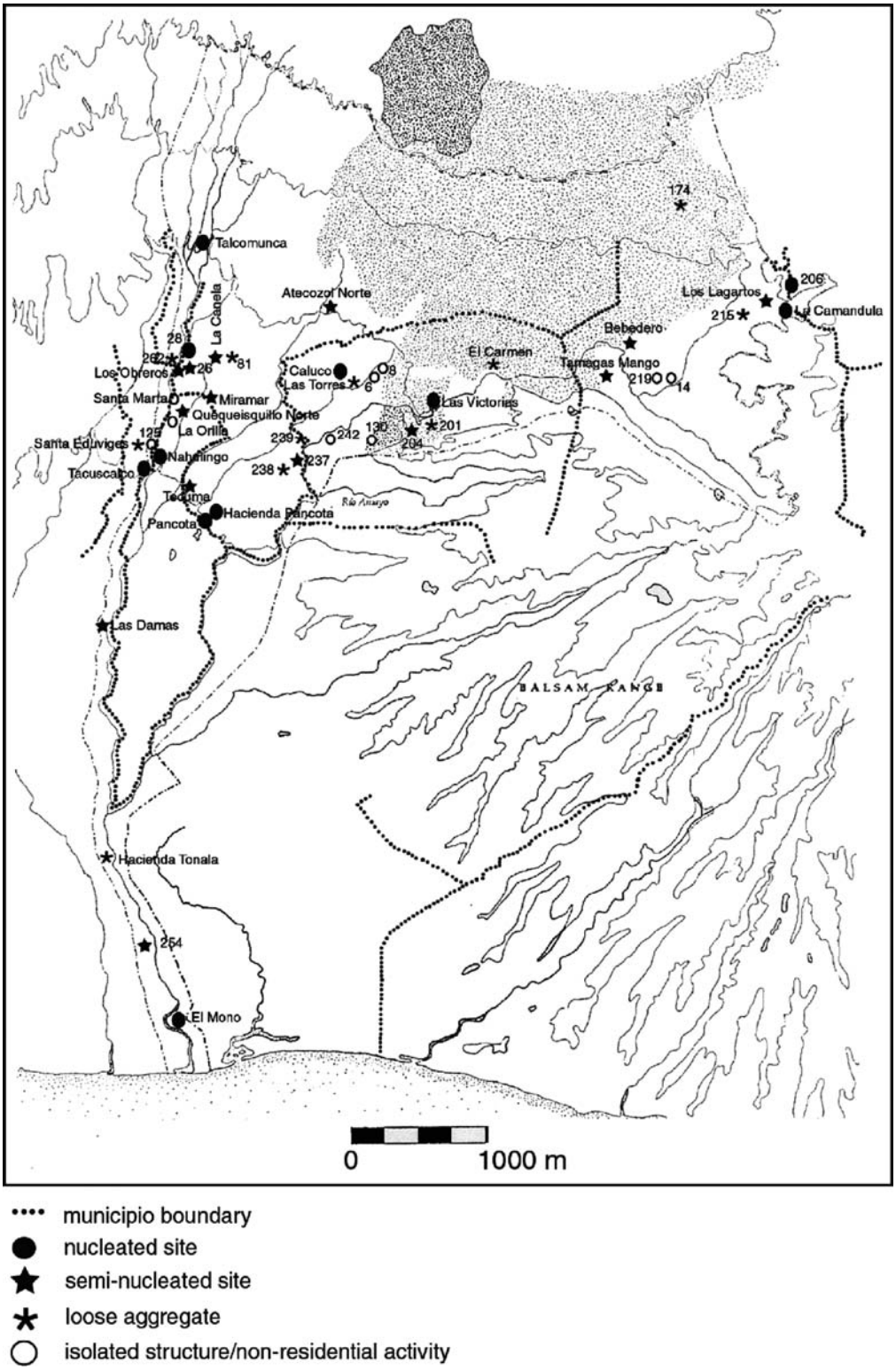

Fig. 1 Marroquín-phase (A.D. 1580–1650) settlement in the Río Ceniza valley, western El Salvador. Nucleation has increased relative to previous phases (from Sampeck, 2007:Fig. 3.31; drawn by Kathryn E. Sampeck)

the central Petén region of Guatemala. These sporadic but prolonged contacts had the most immediate effect of exacerbating tensions between dominant lineage groups and a rapidly changing political geography. They offer a correlation of historical references with archaeological data for the central Petén. They emphasize that this region was occupied by multiple and competing dynastic lineages and ethnic groups, an important fact that the Spaniards attempting to subdue these groups did not realize for almost two centuries. Other important factors in this long struggle involved Maya prophesies of cyclical change, calendrical reckoning, and political organization.

Urban Landscapes

The spread of the Spanish American grid-plan city during the Conquest period provides an opportunity to apply the landscape paradigm to urban settings in Central American historical archaeology (Chueca Goitia et al., 1951; García Fernández, 1989; García Zarza, 1996; Kubler, 1978; Markman, 1978). Early colonial Spanish cities in America functioned overtly as vehicles of conquest and played a crucial part in the radical transformation of the cultural and physical landscape of Spanish America (Centro de Estudios Históricos de Obras Públicas y Urbanismo, 1989). They represented an ideological statement (sensu Leone, 1984:26) by conquistadors acting on behalf of the Crown to impose moral, legal, and religious order, or *policía* (Kagan, 2000a:131–134, 2000b:26–28; Messmacher, 1987:157) on alien and hostile populations. The physical embodiment of *policía*, the imposing plan of the grid-plan city, symbolized Hispanic civilization itself and evoked a propagandistic statement concerning the power of the empire that translated into very specific notions of spatial patterning derived from the social structure of the Conquest (Martínez, 2000:17–19). This patterning takes on great importance as a geographical statement because it allows an understanding of the landscapes of Spanish American grid-plan cities from both emic and etic perspectives. The grid plan was "simultaneously a plan, discourse, and instrument of control . . . , it became one of the central devices of Spanish colonization—at once a sign of the colonizers' religiosity and civility" (Martínez, 2000:18). The symbolism of the siting of the government buildings and church on the central plaza underscored the power of the sword and the cross in imposing the Spanish imperial will locally (Robinson, 1989:165). Thus, in a very real geopolitical sense, the conquest emanated outward from the plaza and the grid to the surrounding countryside (Domínguez Compañy, 1984:30; Markman, 1978:478).

To understand the foundational process of the Spanish grid-plan city in its full historical and cultural context, one must recognize that the process of landscape production happened recurrently and constantly, repeating itself locally each time and in every place where Spaniards and local labor forces built conquest cities in the New World. Although the founding of Spanish conquest cities in theory was under centralized control, in actual practice the foundings were remarkably decentralized, resulting in a great deal of behavioral autonomy and heterogeneity in local decision-making. Therefore, I emphasize local aspects of the implementation of the grid plan and the implantation on the local landscape of Spanish conquest cities as a means to analyze social relations played out within and upon the landscape.

The first Spanish settlement in the New World was La Isabela, built in 1493 on the north coast of Hispaniola by members of Christopher Columbus's second voyage to America (Deagan and Cruxent, 2002a, 2002b). Santo Domingo and more than a dozen other cities quickly followed suit on the island. The first two decades of the sixteenth century witnessed the first wave of Spanish urban expansion on the islands of Hispaniola, Puerto Rico, Jamaica, and Cuba, followed by an extension to the mainland in the Isthmus of Panama in 1502 and to Mexico by 1519. Spanish American urbanism then spread from Panama and Mexico to Central America beginning in the 1520s and southward from Panama to Colombia, Venezuela, Peru, and the entire Andean area starting in the 1530s. By the end of the sixteenth century, only a century after the first foundings of Spanish conquest cities in the Antilles in the 1490s, more than 400 Spanish American cities had been founded in the New World (Romero Romero, 1989). In Central America alone, approximately 44 Spanish towns and cities were founded during the sixteenth century (Aguilera Rojas, 1994:195–196; Meléndez Chaverri, 1977).

Santo Domingo became the first European grid-plan city in the New World. After the original settlemen of Santo Domingo was destroyed by a hurricane in 1502, Governor Nicolás de Ovando rebuilt the city on the other side of the Ozama River in a grid-plan layout, and he supervised the construction of a network of 14 other grid-plan cities during the 8 years of his governorship (Hardoy, 1989:14–17; Sauer, 1966:151–155). Scholars agree that Ovando's model for the plan of Santo Domingo was Santa Fe de Granada, the siege town built to topple the last Moorish kingdom in Spain, but that other antecedents exist in Spain going back to as early as the twelfth century (Luján Muñoz, 1994:691; McAlister, 1984:149; Palm, 1992b). However, the layout of Santo Domingo, while indeed aligned to a grid, is not rigid; the streets are straight but not parallel, and the polygonal blocks vary in size. Likewise, the main plaza is polygonal and off-center (Palm, 1992a; Tejeira-Davis, 1996:33). Concerning the implementation of this particular plan, while Ovando was acting on rather vague instructions from the Crown to found new *villas* for Spaniards throughout the island, his choice of the off-center grid-plan layout appears to have been based on his own discretion and his experience in Granada rather than explicit royal orders (Martínez Lemoine, 1977:24).

From Santo Domingo, the plan was taken to the mainland. Of the half-dozen cities founded by Pedrarias Dávila in Panama, the only ones known and available for study today are Panamá la Vieja (1519)[1] and Natá (1522). Tejeira-Davis (1996) compared the plans of these two cities and found that the layout of Panamá la Vieja, a port city, was quite irregular and polycentric with the plaza being off-center, the lots long and narrow, and the streets unparallel. He concluded that the layout of Panamá la Vieja was closer to the medieval conception of urbanism than to the novel Conquest-period grid-plan city (Tejeira-Davis, 1996:43). On the other hand, Natá, an inland site located 15 km up the Río Chico from the Gulf of Parita, near the populous sixteenth-century chiefdom center of the same name, was laid out on a spacious, orthogonal grid with a central plaza (probably), square lots, and four-lot blocks enclosed by parallel streets (Tejeira-Davis, 1996:45). Natá represents the first example of a large-scale, orthogonal, grid-plan city in Spanish America, and Tejeira-Davis (1996:52) suggested that it served as the model for similar plans of later date, echoed by later cities built in Central America and Mexico, especially Granada (1524), León (1524), Santiago de Guatemala in Almolonga (1527), San Salvador (1528), and Oaxaca (1529).

Some limited archaeological work has been conducted at León Viejo, Nicaragua (Blaisdell-Sloan, 1999; Dickau, 1999; Espinosa Pérez, 2004; Espinosa Pérez et al., 1999; Ortega, 1988). Most of this work has been aimed at revealing specific buildings: the *convento* of La Merced, the church of La Merced, the Mercedarian chapter house, the cathedral of Santa María las Gracias, the convento of Santo Domingo, and the Fortress (Werner, 2000). Argüello Argüello (1969:136–142) offers a detailed description of the cathedral, including dimensions and building materials. A number of human burials have been excavated, and it is generally believed that three of them may represent the remains of Governor Pedrarias Dávila, Captain Francisco Hernández de Córdoba, and Bishop Antonio de Valdivieso (Espinosa Pérez, 2004). Because the site was covered by the eruption of Momotombo volcano in 1610, it has been difficult to reconstruct its plan, but scholars assume that it was built on a grid (Arellano, 2002:45). Ortega (1988:35) estimated a total area for the site at 40 ha.

The best-preserved example of a grid-plan Conquest town in Central America is Ciudad Vieja, the ruins of the first villa de San Salvador, located in a rural area 10 km south of Suchitoto, El Salvador (Fig. 2). Dispatched from Santiago in Olintepeque under the command of Gonzalo de Alvarado, a small group of Spaniards founded the first villa of San Salvador in April 1525, probably on the same site as the later 1528 settlement. The first European town of El Salvador was built in the valley of La Bermuda, a small pocket to the north of Cuscatlan Pipil territory that apparently had little or no indigenous settlement at the time of the Conquest (Fowler and Earnest, 1985), but it was still prone to attack, especially from the west and the south. The Pipils rebelled and drove out the Spaniards sometime in 1526 (Barón Castro, 1996:39–44), forcing them back to their base in Guatemala. Pipil resistance waned by early 1528, however, allowing the Spaniards to return and found a permanent settlement, which

[1] The Patronato Panamá Viejo (2007) maintains an excellent Web site with a considerable amount of archaeological and historical information.

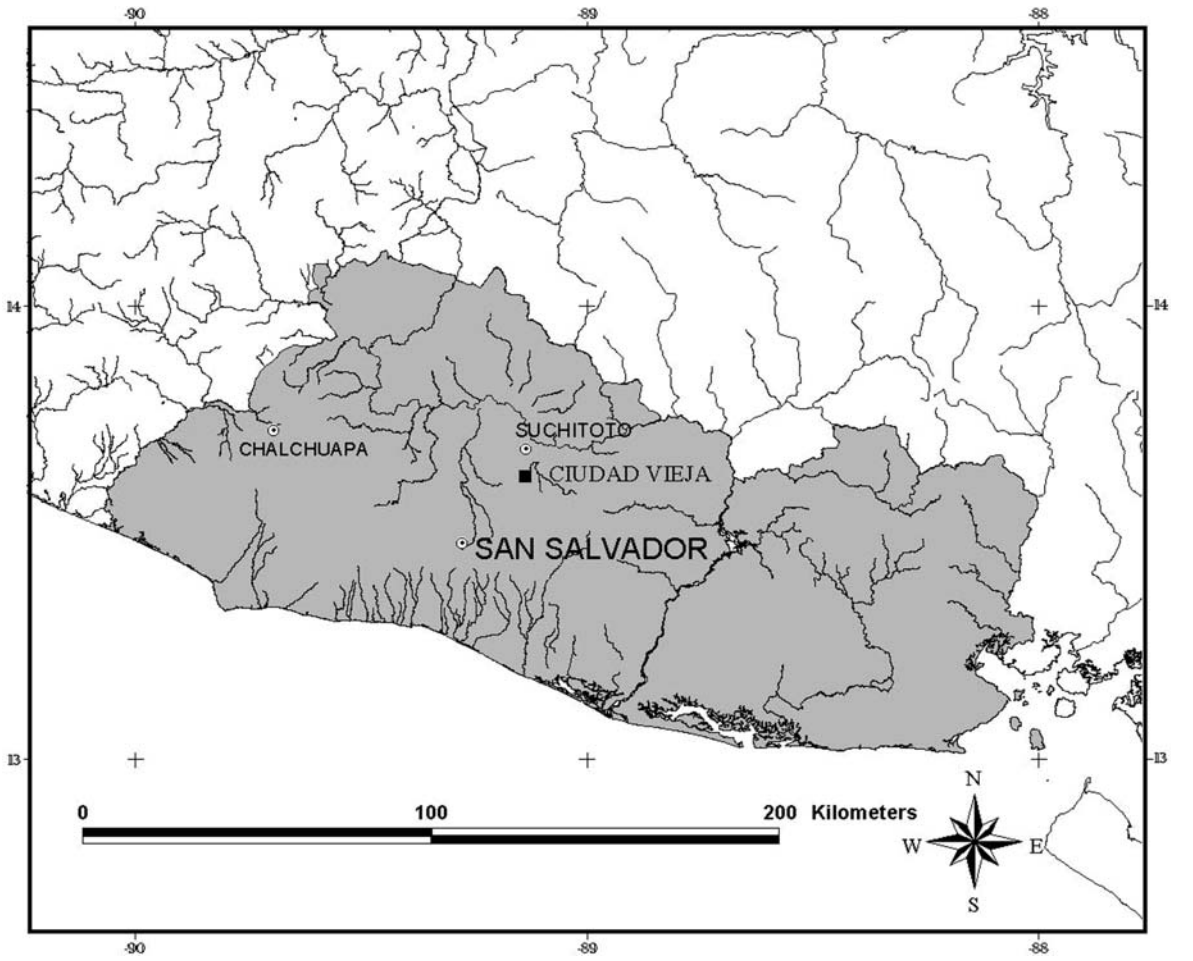

Fig. 2 Map showing location of Ciudad Vieja within El Salvador (from Fowler, 2006d:Fig. 1.2; drawn by Francisco Estrada-Belli, based on data distributed by the National Aeronautics and Space Administration [http://servir.nsstc.nasa.gov])

resulted in the second founding of the villa of San Salvador on April 1, 1528, by 73 conquistadors under the command of Diego de Alvarado, all of whom declared themselves residents of the town (Barón Castro, 1996:87–91, 197–202; Lardé y Larín, 2000: 108–110). The town was abandoned 15 years later and moved to the modern location of San Salvador in 1545 (see Fig. 2).

Two major Pipil polities dominated the territory of modern El Salvador at the time of the Conquest: the relatively small Izalcos kingdom in the west and the larger Cuscatlan kingdom in the central region (Fowler, 1988, 1989a:60–64, 1991, 1994, 1999). The Cuscatlan polity was centered on the *altepetl* of Cuscatlan (modern Antiguo Cuscatlan), located just west of modern San Salvador. Cuscatlan had probably conquered a number of smaller Pipil polities such as Nonoalcos and Cojutepeque during the late Preconquest period. The Spaniards effectively dominated the Pipils by the time of the second founding of San Salvador in 1528, although some armed resistance still occurred in the region until the end of the 1530s. The eastern portion of the country, between the Lempa River and the Gulf of Fonseca, was held primarily by the Lencas whose distribution extended from eastern El Salvador north into central and western Honduras (Fowler, 1989a:64–65; Lara Pinto, 1991, 1996:116; Newson, 1986:20–25). The Lencas were only partially subdued at the time of the second founding of the town.

Archaeological research at Ciudad Vieja began in 1996 (Card, 2006; Fowler, 2006a, 2006b, 2006c, 2006d; Fowler et al., 2007; Gallardo, 2000, 2004, 2006;

Hamilton, 2006a, 2006b; Hamilton et al., 2006; Scott, 2006). This research has established that the site was built on a grid plan with a core area covering 45 ha (Fig. 3), virtually all of which was artificially leveled and filled with various types of constructions making it truly an urban landscape of impressive proportions. Like the urban plan of Natá, described above, the plan of San Salvador is rigid and strictly orthogonal (see Fig. 3), a paragon of the Conquest-period Spanish American grid-plan city. Visitors to the city, Spanish and Indian alike, in its prime of occupation and expansion, say about 1535, surely would have been impressed with the strict, orderly layout of the site plan with the spacious plaza at the center, the church to the east of the plaza, the *cabildo* and municipal buildings on the north, stores and shops on the west, and a market and shops on the south. Long, straight streets run from (or into) the four corners of the plaza in the cardinal directions. The one exception to the straightness of the streets is the street running south from the church (and the southeast corner of the plaza) which curves around a natural spring, probably an important water source during the period of the town's occupation. Other streets run parallel and perpendicular to the main streets, bisecting each other to form large lots, most of which were probably subdivided into quadrants for the purpose of assigning them to residents.

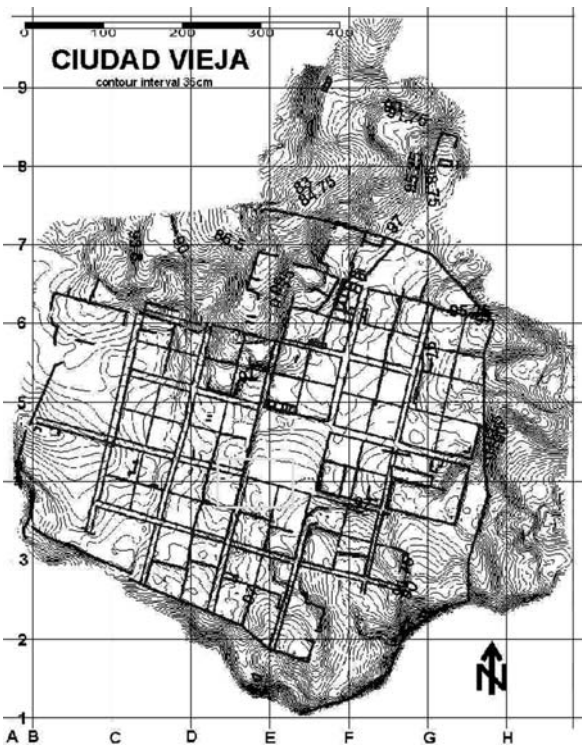

Fig. 3 Urban grid plan of Ciudad Vieja, the first villa of San Salvador, projected over the natural topography of the site (from Fowler, 2006d:Fig. 1.1; drawn by Conard C. Hamilton)

The plaza measures approximately 100 m on a side including the spaces around the interior streets around the edges on all four sides. The square city blocks measure approximately 80 m (100 varas) on a side, bounded by streets about 8 m in width. Most of the blocks were probably subdivided into four *solares* or house lots of approximately 40 by 40 m (50 by 50 varas) as shown on the projected grid in Fig. 2. This size for house lots was probably modal. The church occupied two entire city blocks on the east of the plaza, while the cabildo and municipal buildings occupied a block on the north. Prominent *vecinos* probably held an entire block. In some cases, they probably occupied or controlled two or more adjacent blocks.

The town displays a great deal of internal functional variability. Among the 18 structures and activity areas that we have excavated, we have identified, in addition to Spanish and indigenous residences, ritual spaces, civic/administrative buildings, food preparation areas, commercial and industrial buildings, warehouses and storage areas, terraces, ramps, and defensive features. The latter consist of guard houses, sentry stations, and a steep, defensible cliff sloping away from the south and east sides of the site. It is expected that future excavations will continue to add to this diverse array of functional variability.

There is also a large degree of internal spatial variability within the city blocks and house lots. While the overall city plan shows strong adherence to the grid-plan layout, excavations and remote sensing data show that there was no prevailing norm concerning the locations of structures within *solares* or the size, shape, and internal arrangement of rooms within structures. There is even significant variation in orientation of structures or parts of structures. Spanish buildings are distinguished by multiroom floor plans, substantial stone foundations measuring 83–84 cm (1 vara) in width, brick tile floors, ceramic roof tiles, and the use of iron nails and other hardware

to secure structural elements. They are generally oriented to the overall site alignment of 12 degrees, but exceptions do occur. Indigenous buildings tend to be one-room structures with narrow foundations, packed earth floors, and no evidence for roof tiles (indicating thatched roofs). Their orientation does not follow the overall site grid. Thus, while the overall urban layout appears quite rigid at first glance, there is actually a great deal of flexibility and variability in internal distribution and use of space.

While the Spanish presence is strongly indicated by the layout of the city, the architecture, and certain industries and classes of artifacts such as iron, brick, and glass, a strong indigenous presence at San Salvador is reflected in the ceramics and other artifact complexes of Ciudad Vieja. Indigenous residents of the town would have included indigenous Pipils as well as Mexican and Kaqchikel groups allied with the Spaniards during the Conquest. Excavations and surface collection have recovered more than 60,000 sherds, and project ceramicist Jeb Card (2007) analyzed more than 10,000 sherds. The ceramic complex is eminently indigenous displaying many forms and decorative modes representing continuities with Late Postclassic materials as well as some new forms and motifs that were introduced or developed during the Conquest period. In addition to the highly visible concentrations of ceramics, obsidian artifacts occur in great numbers on the surface and are recovered in excavations (Fowler and Card, 2005). The use of obsidian tools and weapons by Spaniards is highly unlikely. Manos and metates occur in some domestic contexts and on the surface. Polished ceramic earflares and jade objects complete the inventory of indigenous-associated artifacts. In sum, the archaeological evidence indicates that this Spanish American town had a native Mesoamerican population of significant proportion. While the grid-plan layout of the town certainly reflects Spanish attitudes toward urban spatial arrangements, the imposition of order, and the legitimization of conquest, the indigenous presence at the city is also quite visible and tangible.

Material Culture Analysis

Card (2007) analyzed the ceramics from eight excavated contexts and structures at Ciudad Vieja and from an extensive surface collection of the site (see also Fowler and Card, 2005). The most striking aspect of the collection is a class of serving plates produced with native Mesoamerican techniques and painted designs but with forms copied from European majolica (Fig. 4). Card refers to these vessels as "hybrid plates." In a very innovative approach, Card seriated the forms of published European majolica plates and found that the hybrid plates of Ciudad Vieja could be dated very precisely with this method. This method confirmed the historically documented occupation span of the site (1525/28–1545), with perhaps a slightly later abandonment than historical records indicate. More importantly, it also provided more information about European majolica at the site than was available from the recovered majolica specimens. The heavy use of hybrid plates in Spanish and indigenous households invites comparisons with other cases of forced indigenous displacement in the colonial Americas (Card, 2007:276–299). Analysis of vessel form and function from the eight excavated contexts shows similar activities in Spanish and indigenous households, as well as the identification of a tavern or other commercial food and beverage vendor in the center of town. Three microstyles crosscut other classificatory categories, suggesting localized or household distribution and possibly local production of ceramic vessels. These microstyles disappear during the later years of the occupation of Ciudad Vieja, and Card suggested that this development indicates the formation of new community cultural practices. Card used these analyses to evaluate models of colonial societies, suggesting that a model of creolization and ethnogenesis (the creation of a new culture or subculture) would be useful for understanding other contact situations in early colonial Mesoamerica.

Blaisdell-Sloan (1999) also suggested a creolization process for the inhabitants of León Viejo, but she referred primarily to the Spanish residents of León rather than the indigenous or *mestizo* inhabitants as Card referred to in the case of Ciudad Vieja. Blaisdell-Sloan also suggested the intriguing possibility that the historically documented high levels of violence inflicted by the Spanish residents of León against Natives as well as other Spaniards may have been associated with a loss of Spanish cultural identity and that this experience was an integral part of the creolization process.

The recent research of Palka (2005a, 2005b) on the Lacandon Mayas of the Pasión River region of Peten, Guatemala, also represents an interesting trend in

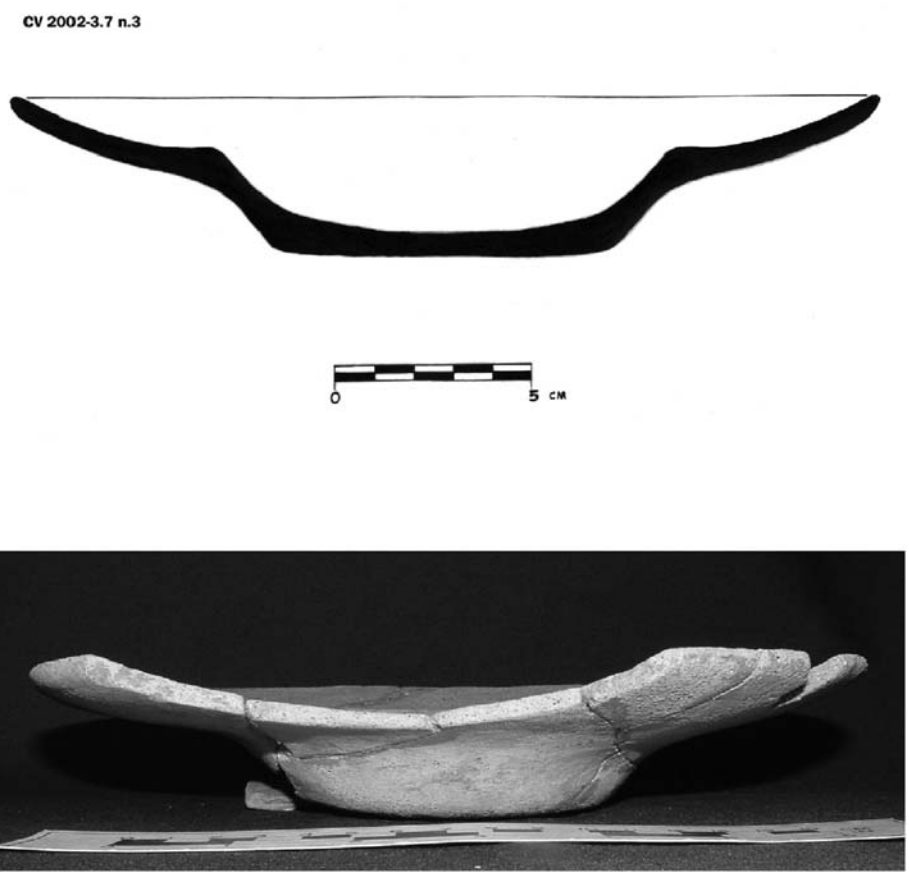

Fig. 4 Ciudad Vieja hybrid plate, Alvarado group (from Card, 2007:Fig. 6.2; profile drawn by Francisco Galdámez; photograph by Jeb J. Card)

material culture analysis. Palka has shown that rather than being isolated from the outside world, the Lacandons of the nineteenth and early twentieth century were able to acquire all manner of tools (especially machetes, knives, and axes), painted earthenware bowls and cups, and even patent medicines through trade with explorers and loggers. At the same time, they maintained a rich cultural inventory of traditional pottery and chipped-stone tools and weapons. Palka (2005b:193) attributed this pattern to active decision-making on the part of the Lacandons and noted that they were "able to make choices in accepting in trade or not requesting material culture from outsiders."

Simmons (1995) has presented a detailed technological and stylistic analysis of small, side-notched projectile points (arrow points) from Colonial contexts at Tipu, Belize. He suggested that stylistic variation among these points may be associated with ethnic differences among the Maya groups that inhabited Tipu during the Colonial period until 1697. While some of these points may have been used in hunting, Simmons thinks it more likely that they were used in bow-and-arrow intimidation of Spanish clergy and other acts of resistance against Spanish domination.

Hacienda Archaeology and the Caste War in Yucatan

This discussion could also be treated as a subsection of the discussion of landscape and settlement above, but I treat it separately because of the special relations of production associated with the hacienda or large, landed, private estate in Mexico (Wolf, 1959:202–211, 243–246, 1969:4–7) and the opportunities afforded by a special category of archaeology of the hacienda to explore these relations. In the particular example described here, the research is made even more relevant

because it not only points the way to an archaeology of the hacienda, but it also sheds new light on one of the most interesting conflicts and social movements in the history of Latin America.

Alexander (1997a, 1997b, 1998, 1999, 2003, 2004) has conducted a long-term, interdisciplinary project of investigation of Yaxcaba and its surrounding region in central Yucatan. Yaxcaba was one of the flash points of the Caste War in Yucatan (1847–1901), widely regarded as the most militarily successful indigenous rebellion in Latin America. Scholars have offered a wide range of interpretations of the origins and consequences of the war, but the issues remain controversial. In brief, the rebellion was fueled by the resentment felt by the Maya peasantry felt over increased taxation, the loss of milpas (maize fields), and physical abuse suffered by laborers on the sugar plantations of the southeast. Consequences included the destruction of the southeastern sugar industry, a demographic and economic shift from the southeast to the center and northwest of the peninsula, and eventually the development of the henequen industry in the northwest (Joseph, 1996; Quezada, 2001:140–162; Reed, 1964). Seen from the perspective of the Mayas, the Caste War was a series of events in a long process of resistance, adjustment, and accommodation to colonialism and the emergence of the capitalist market economy. As Alexander (2004:13) has noted, Creoles appear as the dominant force in historical accounts, yet Maya peasant agriculturists are most prominent in the archaeological record.

Alexander has combined documentary research with the methods of regional settlement survey and household archaeology to address the questions of how the Mayas reacted to the changing economic and political landscape before, during, and after the Caste War. Her survey focused on Yaxcaba parish, identifying 30 sites within an area of 18 by 24 km. To classify the sites, she developed a four-tier settlement hierarchy: the *cabecera* of Yaxcaba; four small towns; 16 haciendas; and nine smaller settlements consisting of rural *ranchos* and *cofradía* estates. Alexander (1997a, 2003, 2004:99–103) raises some very important points with regard to variation among the haciendas. She argues that variability in the amount of masonry architecture of haciendas is not simply an index of relative wealth and prestige but can be attributed to the development of production over time as well as the entrepreneurial strategy pursued by the hacienda's owner. To demonstrate these points she develops a relative measure of differential wealth expended in architecture through an estimate of total floor areas enclosed by masonry walls.

Alexander's archaeological evidence also demonstrates that agrarian production among the communities of the parish was not uniform. Their strategic responses to economic change, especially the distribution of land, were flexible and varied. Differences in spatial patterning among and within house lots in the parish show variation in production strategies and a wide range of tactics intended to minimize subsistence risk. She links differences in spatial organization among the settlements in the parish to variation in demographic growth, tax structure, and land stress occurring with changes in the local political economy. Ultimately, Alexander's Yaxcaba research indicates that the Caste War rebellion itself was not the prime cause of agrarian reform and other changes that occurred. Rather, the explanation for these changes must be sought in the "long-term processes that link tactics of accommodation, survival, and resistance to agrarian structure" (Alexander, 2004:13).

An interesting complement to the Yaxcaba project is Alexander's work on Isla Civiltuk, southwestern Campeche. In this region, Spanish colonization was much less successful than in the regions closest to Mérida, Valldolid, and Campeche, the centers of Spanish control. Using models from settlement and household ecology, evidence from intensive regional and site survey, and a household archaeology approach, Alexander (2005) attributes an active role to Maya strategies of agriculture and political organization in the Spanish failure to dominate the region.

Archaeology of the Early Church in Yucatan and Central America

In a very important synthesis, Graham (1998) defined what she called "mission archaeology" as "a novel conjunction of terms devised to focus attention on an archaeology of mission sites, and thereby on the light that be shed on the process of Christianization of the Americas by examining the material culture of missions." She suggested that it would be profitable to focus less on early friars as agents of imperialism and more on the concept of

cultural imagination. The idea of a changing cultural imagination as the result of the encounter with Christianity can be examined from both the indigenous and the European perspective, and both lines of inquiry, Graham (1998:28) noted, can profit from archaeological analysis. She pointed out that it is misleading to think that Europeans had a special claim to Christianity. New World indigenous societies experiencing proselytization responded not to an elusive Christian ideal but to a reality that they helped to create, a set of ideas and a material existence about which they thought very deeply. Thus, it is very important to approach studies of the early church as a "reflection of the idea of changing cultural imagination and reordering of a conceptual universe," and to avoid the simplistic approach of either acceptance or rejection of an "orthodox" Christianity and the equally simplistic idea of the church as merely an instrument of colonial domination (Graham, 1998:29).

Such an approach can be illustrated with archaeological data from Franciscan missions in Yucatan from 1544 to 1579. During this time Franciscan friars established *conventos* (friaries) and small churches in both urban and rural settings throughout Yucatan. From these *conventos*, the friars traveled in *visita* rounds to more remote native communities where they often built small chapels or churches (Andrews, 1991; Graham, 1998:50). Remote Maya settlements such as Lamanai and Tipu were served by part-time *visita* missions (Graham, 1991; Graham et al., 1985; Graham et al., 1989; Jones et al., 1986; Pendergast, 1986a, 1986b, 1991; Pendergast et al., 1993). Permanently staffed churches such as the one at Ecab (Andrews et al., 2006), for example, were constructed near larger native population centers. In general, the allocation and distribution of Franciscan missions corresponded with Conquest-period demography.

Building on earlier archaeological studies by Thomas (1988) and Andrews (1991), Hanson (1995) developed a spatial-temporal model of Franciscan missions in Yucatan from 1542 to 1579. These studies outline a sequence from simple ramada chapels to ramada chapels and complex ramada chapels. In simple ramada chapels, a masonry wall enclosed the sanctuary at the east end of the structure. Frequently, the chapel was placed on a Prehispanic platform. Masonry walls consisted of reused or newly quarried blocks. The roof was made of pole and thatch. The nave was less than 20 m in length. The floor of the chapel was often a cemetery.[2] Examples include Ek Balam, Tancah, Xcaret, Lamanai, and Tipu.

Ramada chapels replaced simple ramada chapels, as seen at Lamanai. Other examples include Tecoh, Ecab, and Dzibilchaltun. Many architectural characteristics from the simple ramadas continued, but the masonry sanctuary was now barrel-vaulted. Adjoining rooms for the choir and sacristy had walls more than a meter in thickness supporting roofs of beams and mortar. The nave was still covered by a pole-and-thatch roof, but it now measured 20–30 m in length. Conventos were located to the west or north of the chapel.

Complex ramada chapels represent the final stage of the sequence. Examples may be found at Mani, Sisal, Tizimin, and Calkini. Permanent masonry structures incorporated previous ramada chapels and added a large, attached convento with a colonnaded courtyard. Complex chapel naves were more than 30 m in length. The roofs of the naves were still covered with pole and thatch. *Doctrinas*, administrative centers of the mission system, existed at the locations of complex chapels.

Hanson (1995) links this model to missions in La Florida and New Mexico in a general theory of Franciscan missionization. Certain aspects of the model may also be extended to Chiapas, Guatemala, and further south and be applied to churches of other religious orders and the secular clergy as well. Markman (1984) provided a wealth of architectural information on Dominican churches in highland Chiapas, especially Santo Domingo in Chiapa de Corzo (see also Gasco, 2005; Lee and Markman, 1977). Markman's (1966) monograph on Antigua (Santiago de los Caballeros), Guatemala, has great detail on the town's cathedral and the churches and conventos of the Franciscan, Dominican, and Mercedarian orders. Most of the churches of Chiapa de Corzo and Antigua represent a stage of development even more elaborate than the complex ramada chapel of Yucatan. Fowler (1995) and Verhagen (1997) described the two churches staffed by secular clergy in the cacao-producing center of Caluco, in the Izalcos region of western El Salvador. The first

[2] Approximately 600 burials were found beneath and around the floor of the church at Tipu (Jacobi, 2000).

Caluco church, built in the 1530s, was a ramada chapel measuring 12 by 27 m, with the long axis running east–west and the sanctuary to the east. It was replaced by the sumptuous, *mudejar*-style church of San Pedro and San Pablo, built between 1560 and 1580. It measured approximately 20 by 40 m, oriented east–west, and featured brick walls 1.5–2.6 m in thickness. The sanctuary, in the east end, was covered by a vaulted masonry roof, and arch-and-beam construction covered with roof tiles over the nave. This was one of the most elaborate churches in Central America for its time. Black (1997), Weeks (1997), and Weeks and Black (1991) examined the archaeological and historical evidence for early Mercedarian missionizing among the Lencas in the Tencoa region of western Honduras. Their work has added a new dimension to archaeology in this region where contact-period sites have been difficult to recognize. As in Yucatan, the locations of these early colonial mission churches were correlated with high native population densities in the Conquest period. All of these churches, whether simple or complex, were prominent markers on the landscape of a new set of ideas and beliefs. They represented powerful symbolic statements by clergy and royal officials intended to impress and awe a newly converted population. Following the lines of Graham's interpretive suggestions, however, this message was almost certainly perceived by indigenous converts in a manner very different from the way in which it was conveyed.

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Archaeologies of the African Diaspora: Brazil, Cuba, and the United States

Theresa Singleton and Marcos André Torres de Souza

Introduction: Defining African Diaspora

African Diaspora refers to the worldwide dispersal of African peoples and their descendants as a consequence of slavery and other migrations out of Africa. The term diaspora, the breaking up and scattering of a people, is often used to describe any dispersion of a people from their original homeland. Diasporas, however, can be distinguished from other types of migrations as they are usually characterized by some or all of the following criteria: (1) forced or induced migration; (2) an enduring presence of the group in new settings as a distinct cultural/ethnic, racial, or religious group; (3) collective consciousness or memory plays a role in the production of cultural heritage; (4) the group experiences some form of alienation in the receiving or host society; (5) the existence of some kind of exchange or relationship between or among spatially separated populations making up the diaspora, and/or with the homeland (Chaliand and Rageau, 1995; Safran, 1991).

The conceptualization of African forced migration as a diaspora formally emerged during Pan-African and Black consciousness movements of the twentieth century. By the mid-1970s, scholars increasingly used the term diaspora to designate the worldwide dispersion of Africans (Bryce-Laporte, 1976; Drake, 1975). Since that time, the African Diaspora has become a well-established research interest pursued in numerous disciplines and subdisciplines of the humanities and social sciences.

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Archaeologists have been slow to adopt the concept of African Diaspora for archaeological examinations of people of African descent. The term has been used with greater frequency since the 1990s, (Franklin, 2001; Franklin and McKee, 2004; Havsier and MacDonald, 2006; Orser, 1998; Singleton and Bograd, 1995), but the archaeological study of a particular diaspora community is usually designated as African American, Afro-Caribbean, or Afro-Latin American. The adoption of the term "diaspora" in archaeology, however, has not yet produced studies in which the concept forms an analytical framework within which experiences of displacement, comparative linkages with other groups of the African Diaspora (e.g., Harrison, 1988), or diaspora theories and discourses (Clifford, 1997; Gilroy, 1993) are examined.[1] Such shortcomings in the use of diaspora as a heuristic tool in archaeological studies, however, do not diminish the role archaeology plays in African Diaspora studies. Archaeology contributes to our understanding of the historical experiences of the people of the African Diaspora as these experiences were lived.

In this chapter, we briefly review some of the archaeological evidence that provides insights into historical experiences of the African Diaspora, as seen from the Americas. African Diasporas were also established in Europe and Asia, but little archaeological work on this subject has been undertaken on these continents. Charles Orser (1998:64) has

[1] Other archaeologists have commented on using diaspora as a framework rather than simply a label for archaeological research on people of African descent, see Franklin (2001) and Weik (2004). Therefore, it is likely that studies using diaspora as an analytical concept will be forthcoming.

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suggested that this absence may be partially explained by the immaturity of historical archaeology in these regions, as well as the greater focus on the archaeology of other time periods and other cultural groups unrelated to the African Diasporas. Even in the Americas, the vast majority of the work has been done in the United States and English-speaking nations of the Caribbean. Archaeological studies in the Dutch-, French-, Portuguese-, and Spanish-speaking countries of the Americas have either emerged in recent years, or have just come to the attention of archaeologists in the English-speaking world. In this essay, we highlight archaeological studies from two countries in these regions where each of us is currently conducting research: Singleton in Cuba and Souza in Brazil. Brazil imported four to five million Africans through the slave trade, which is more than any other nation in the Americas, whereas Cuba imported about one million Africans more than any other colony of the former Spanish empire. Together, both countries became the host, or receiving, countries of approximately 40 percent of the all the Africans transported through the transatlantic slave trade.

Our discussion focuses on slavery and marronage, which is flight from enslavement or self-emancipation. Admittedly, this framework privileges the transatlantic slave trade and centers on slavery as the point of departure for understanding experiences beyond slavery. This partially reflects our biases as students of slavery, as well as the fact the vast majority of archaeological research has been undertaken on slavery and marronage. Slavery has been the primary topic archaeologists have studied in the United States, whereas in Brazil and Cuba, more attention has been directed toward self-emancipated communities than on plantations. Secondary migrations following the slave trade are receiving increased attention, such as the relocation of black loyalists, who were people of African descent who sided with the British in the American Revolutionary War, to the Bahamas (Wilkie and Farnsworth, 2005) and Nova Scotia (MacLeod-Leslie, 2002).

Social Context of African Diaspora Archaeologies

Over the past two decades, archaeologists have begun to unravel the sociopolitical circumstances that have influenced archaeological practice throughout the world (Kohl and Fawett, 1995; Patterson, 1994; Trigger, 1984). The sociopolitics that gave rise to the archaeology of the African Diaspora in the United States has been discussed in detail elsewhere (Ferguson, 1992; Singleton, 1985, 1995, 1999a, 1999b). We briefly review its emergence in the United States and discuss its emergence in Brazil and in Cuba.

Several social and political movements of the second half of the twentieth century fueled archaeological research in the African Diaspora, although some initial testing of former black-occupied sites, such as Black Lucy's Garden in Massachusetts (Bullen and Bullen, 1945) and plantation sites in Virginia (Nöel Hume, 1966), preceded these social movements. The Civil Rights, Black Consciousness, Black Studies, New Social History, and Women's movements all contributed to persuading archaeologists to investigate the remains of past peoples who had been forced into subordinate social positions, and who left few, if any, written records that they authored themselves about their lives. Concurrent, but unrelated, to these social movements was the passage of historic preservation legislation that provided federal funding for making the archaeological study of African Americans, as well as other neglected subjects possible (Ferguson, 1992:xxxv–xl). Many African American sites were investigated that otherwise would not have been studied because they were threatened with destruction by development projects that were partially supported with federal funds.

Preparation for the Bicentennial celebration of the United States in 1976 provided another impetus for the archaeological study of African Americans. Eager to identify African American sites that could be included among those that commemorate important European Americans during the age of the American Revolution, black preservationists sought the assistance of archaeologists to conduct preliminary testing at sites dating to the eighteenth century. The African Meeting House in Boston (Bower, 1991) and the Parting Ways Site in Plymouth, Massachusetts (Deetz, 1996), were among a handful of sites identified as being of potential interest for the Bicentennial Commemoration.

Archaeology of the African Diaspora in the United States continues to be influenced by black activism and other political forces. Perhaps the

most notorious example is the study of African Burial Ground located in lower Manhattan in New York City. Once the public learned that excavations were being conducted on an eighteenth-century burial ground of enslaved Africans, the African American community of New York demanded, and successfully obtained, a role in decision-making concerning further excavations and preservation of the site. Today, archaeologists strive to involve African Americans in their archeological projects from the very beginning, often involving them as collaborators in the research (Derry, 2003; McDavid, 2003).

The sociopolitics that have given rise to the archaeological study of the African Diaspora outside the United States vary from place to place, and are complicated by constructions of race, class, and national identity, as well as by ideologies of particular political regimes. Additionally, sociopolitics within a particular local setting may be quite different from the larger nation or region. We discuss social context here because it partially explains the concerns of archaeologies of the African Diaspora as these have developed in Cuba and Brazil, as well as locates our own research within these contexts.

In Cuba, where historical archaeology has a long tradition, the rise of African Diaspora archaeology paralleled the development in the United States. Between 1968 and 1970, the Archaeology Department of the Cuban Academy of Sciences conducted excavations at Taoro, the site of a former sugar plantation, located outside the city of Havana (Domínguez, 1986:273). The study involved testing around several plantation buildings, including the *barracón*, a type of Cuban slave quarter, and a slave cemetery. According to Domínguez, this was the first known systematic excavation of a Cuban slave cemetery. The work at Taoro was initiated around the same time similar testing began on slave quarters in Florida and Georgia (Ascher and Fairbanks, 1971; Fairbanks, 1974). Sporadic excavations had been undertaken at Cuban plantations prior to work at Taoro, but these studies were primarily directed toward architectural restoration (Boytel Jambú, 1962), as is the case for much of the research undertaken today.

The archaeological study of slavery and marronage fits well within the historical-materialist perspective that Cuban social scientists adopted once Cuba became a socialist country in 1961. Historical materialism is a Marxist theory premised on the idea that all forms of social thought, including art, philosophy, social institutions, and so forth, are founded on an economic base and reflect the character of economic relations (McGuire, 1992). In Karl Marx's scheme, societies based on slave labor fit within a precapitalist stage of historical development. That the study of Cuban slavery and marronage figured within the historical-materialist framework of Cuban archaeology is indicated in the writings of Cuban archaeologists. Lourdes Domínguez (1986:269), for example, locates studies of both enslaved Amerindians and of Africans in Cuba within the Marxist-Leninism paradigm of Soviet archaeologist Alexander Mongait. Soviet archaeology had a profound impact in shaping the nationalist agenda of Cuban archaeology, which was to define and explain Cuban history and prehistory from a materialistic perspective in which themes such as struggle and resistance are emphasized (Berman et al., 2005:48). Domínguez (1986:278) also argued for the archaeological study of slavery in order to correct what she perceives as confusing information found in written documents concerning slavery. An incipient archaeology of the African Diaspora was taking shape in Cuba between the late 1970s and early 1980s, around the same time that similar research was developing in the United States. Cuban archaeologists, however, were severely restricted in their ability to further develop African Diaspora archaeology, specifically, or archaeology as a whole, due to the loss of Soviet foreign aid and the subsequent collapse of the Cuban economy in the early 1990s (Berman et al., 2005:58). Therefore, only a few archaeological projects of the African Diaspora have been undertaken, and even fewer have been published.

The chronological development of an archaeology of the African Diaspora in Brazil may also be roughly parallel to the United States and Cuba, although the volume of research carried out and published, while greater than in Cuba, is considerably less than in the United States. As in the Cuban case, the first correlation between slave-related groups and archaeological evidence in Brazil involved the study of a cemetery located in the caves of Serra Negra in southern Brazil during the 1930s by Loureiro Fernandes, who attributed this evidence to runaway groups (Lima, 1993:225). In

the 1960s and 1970s, historical archaeology in Brazil emerged as a field of study, initially through research conducted by prehistorians and, eventually, by the gradual specialization of some scholars in the historical period. Despite this development, archaeological studies of slavery during this period were confined to discussions related to the production and use of locally produced pottery, an interest that arose concomitantly with the first systematic studies in the Brazilian historical archaeology (Dias, 1964). The apparent lack of interest in slavery by Brazilian archaeologists may be partially related to the tendency for archaeologists to concentrate their efforts in the investigation of sites associated with monumental architecture, of political significance, or pertaining to important events. Lima (1993:226) suggests that archaeologists preferred excavating these kinds of sites because the official understanding of cultural heritage during that period was based on an elitist ideology devoted to the material production of politically dominant segments of Brazilian society. The military dictatorship (1964–1985) played a significant role in creating this attitude because the official ideology of that regime constrained archaeological practice through vigilance, oppression, and violence. Additionally, the military dictatorship repressed debates that questioned some of the legacies of slavery, such as racism. To question the existence of racism in Brazil during the dictatorship was considered a subversive act (Azevedo, 1975:53). Consequently, archaeologists avoided research that suggested cultural differences among Brazilians.

With the exception of a pioneering study carried out by Guimarães (Guimarães and Lanna, 1980) concerning slave runaway settlements (known in Brazil as *quilombos*), a shift in the archaeological study of Afro-Brazilians only occurred in the 1990s, when analyses devoted to enslaved and self-emancipated groups were published, and issues such as slave resistance, identity formation, and cultural difference were introduced. The end of the dictatorship in Brazil, and the consequent reinstatement of citizenship and civilian freedoms, fueled contemporary agendas that valorized the recognition of social diversity and the study of subjugated groups. These issues ultimately had an impact on archaeological practices in Brazil. These studies also benefited from a growing interest among some Brazilian historical archaeologists of literature produced by archaeologists in Anglophone countries, especially the United States and England, that offered an analytical basis for these investigations. The influence of Anglophone works is evident in the bibliographical references of these studies. Despite these developments, the preference for the investigation of monuments and other sites linked to famous individuals or events persists today. When one considers the demographic significance of enslaved Brazilians during the eighteenth and nineteenth centuries, investigations dedicated to the study of slavery are still greatly underrepresented, and limited to a few projects.

Archaeological studies of the African Diaspora began in earnest around the same time in Brazil, Cuba, and the United States. While this research interest has grown at an exponential rate in the United States (Franklin and McKee, 2004:1), its growth in both Brazil and Cuba has been limited due to a variety of complex social, political, and economic issues.

Slavery

Approximately 11–12 million Africans were forcibly transported through the transatlantic slave trade during a period lasting more than 400 years, beginning around 1450 and ending by 1870. Slave labor was used in numerous economic pursuits, but primarily in the production of staple crops on plantations and farms throughout the Americas. With a few exceptions, archaeological studies of slavery have focused on slavery on plantations and farms. The emphasis on plantations, particularly large plantations, compared to other kinds of sites is often criticized, but plantation sites with separate, spatially defined slave quarters provide the best archaeological deposits for interpreting slave activities and lifeways. Sites where both slaveholders and slave workers occupied and used the same spaces are more difficult to interpret, though archaeologists have attempted to piece together some aspects of slave life from these sites as well (e.g., Deetz, 1993; Yentsch, 1994).

Plantations varied a great deal both through time and space. In each of the countries emphasized

herein there were considerable regional and temporal variations. These differences influenced the organization and management of labor, the character of slavery, relations between enslavers and the enslaved, and the ways of life for all plantation inhabitants. Uncovering the extent to which these differences are manifested in the archaeological record is a major objective of plantation archaeology, and comparative studies of slavery permit us to examine the ways in which slave societies in the Americas are unique, as well as similar. It is important to recognize that in the comparison that follows, research in Brazil and Cuba is at a more descriptive level than in the United States because considerably less work has been conducted in these regions. Despite this difference, however, it is still possible to see similarities and differences in the three situations.

United States

Archaeological research on slavery has been undertaken in almost every former slave state of the southern United States, and increasingly in northern states at sites predating the abolition of slavery. The amount of archaeological work in the United States, however, has been uneven. More investigations have taken place in Virginia than in any other state, whereas few investigations have taken place in the deep southern states of Alabama, Mississippi, or Texas. Although contract archaeology accounts for a great deal of the work on plantations threatened with destruction, research projects are gaining increased importance. These research projects, conducted by both academic institutions and plantation museums—for example Monticello, Mount Vernon, Montpelier, the Hermitage, Poplar Forest, and others—have long-term archaeological investigations, of which research on slavery and other aspects of plantation life continues to be a part.

The extent of plantation archaeology in the United States is so immense that it is impossible to review the findings in any detail. Instead, this discussion looks at some of the overall trends. Since its inception, archaeological studies of slavery in the United States have sought to address two basic concerns: (1) the ways in which archaeological findings reflect African American cultural practices or identity that may be partially related to an African heritage; and (2) information on slave living conditions and how master–slave relationships affected those conditions. Oftentimes, these two concerns are framed so that they are interrelated, while at other times, each question is framed as a distinct avenue of inquiry. In either case, a focus on one generally provides data and interpretations for the other. For example, all archaeological research on slavery contributes to the study of slave living conditions regardless of the expressed research goals. At the same time, research emphasizing African American cultural practices provides information not only on slave living conditions, but also for making inferences concerning master–slave social relations.

The study of African American cultural practices began with a narrow focus on identifying artifacts that were suggestive of African aesthetics or practices. Initially, few if any, artifacts met these criteria. Eventually, this study centered on the analysis of handcrafted items, namely Colonoware pottery and pipes recovered from slave sites in South Carolina and Virginia. Colonoware is a generic term used to refer to low-fired, hand-built (formed by hand rather than turned on a potter's wheel) earthenwares. Some varieties are known to have been made by Native Americans, whereas others show evidence of having been fired on plantations, and therefore were presumably slave-produced artifacts (Ferguson, 1992:27–32). Earthenware or terra-cotta pipes have been recovered only from seventeenth-century sites in Virginia and Maryland. Some archaeologists believe it is unlikely that Africans and African Americans produced these pipes because of their seventeenth-century date, which was a time when the African population of the Chesapeake was only about five to seven percent of the total population. Additionally, the designs and motifs on the pipes—distinguishing features of these pipes—are found on pipes and other objects produced by Precolumbian peoples of the Chesapeake (Mouer et al., 1999:98–111). While the verdict is still out as to whether or not Africans played a role in the making of Chesapeake pipes, African Diaspora communities produced both pottery and pipes elsewhere in the Americas, as will be discussed for Brazil and Cuba.

Archaeologists are paying more attention to other kinds of artifacts suggestive of African American culture and identity. These include a wide variety of objects that singularly may appear insignificant, but when considered together form a suite of implements African Americans used in conjuring, divining, and healing—all of which form an integral part of slave religion (Fett, 2002:36, 85). These objects include polished stones and crystals, pierced coins, bone disks, cowrie shells, animal bones, and other materials. Caches of these artifacts have been recovered from urban sites in Annapolis, Maryland, and they have been interpreted as Hoodoo, a southern folk term for African American conjuring. This interpretation is based upon numerous descriptions of conjuring found in African American folklore and oral testimony (Leone, 2005; Leone and Fry, 2001:143). The geographic distribution of these artifacts, however, is not restricted to sites in Annapolis or in the upper South, and in fact, pierced coins and other objects are recovered from a variety of slave sites throughout the South, as well as in the Caribbean.

Interpretations of African American identity and cultural practices also have been proposed from the study of mud-walled slave houses (Ferguson, 1992:63–81), storage pits found within slave cabins (Samford, 1999; Yentsch, 1991), culinary techniques (Ferguson, 1992:96–107), and objects of adornment (Heath, 1999; Stine et al., 1996). Most archaeologists recognize that identity formation involves complex social processes between and among different groups of people. The concept of creolization refers to and helps to explain the multicultural interaction, exchange, creativity, and ultimately change that produced colonial cultures throughout the Americas, including numerous African American cultures. It is within this or similar frameworks that analyses of objects suggestive of African American identity are most often interpreted today.

Studies of slave living conditions provide information on slave housing, foodways, personal hygiene, adornment, and recreational activities. Some studies have compared materials from slave sites with materials from the sites of slaveholders and overseers at the same plantation in order to observe how plantation social hierarchies were maintained in material culture, and to analyze the distribution and recycling of food and household goods from slaveholders to overseers and enslaved laborers (Kelso, 1984; Otto, 1984). Early studies of slave living conditions often assumed that most items found in and around slave quarters were the remains of items provisioned to slave workers. With the emergence of studies on the independent economic activities enslaved people pursued for themselves (Berlin and Morgan, 1991), including slave consumption (Fennell, 2003; Heath, 2004) and slave property-holding (Penningroth, 2003), archaeologists now interpret many of the objects found archaeologically as items enslaved people acquired through their own efforts. The independent activities in which enslaved people were engaged, referred to as the slaves' economy or informal economy, included producing food for themselves and for sale, raising livestock, hunting and fishing, producing finished goods such as baskets, furniture, or pottery, and marketing their own products. As archaeologists learned more about the slaves' economy in various settings in the United States, the Caribbean, and Latin America, the idea that enslaved people owned nothing and the debris recovered from the sites they once occupied represents the material culture of "people with power and influence [slaveholders]" (Hall, 2000:19) began to erode rapidly. That slave workers acquired some of their personal and household possessions through purchase, barter, or other kinds of exchanges indicates that they exerted some influence on their material lives, even though this influence was undoubtedly highly circumscribed.

One context for understanding slave independent production, consumption, and identity formation may be the slave household. Most archaeological studies of slavery have focused on slave houses, but the use of slave households as a unit of analysis in archaeology is just beginning. Two pioneering studies, both from the Virginia tidewater, have begun to examine slave life at the household level. Maria Franklin (1997) investigated an eighteenth-century slave household at the Rich Neck Plantation. She coined the term slave subhousehold to refer to the domestic unit consisting of enslaved blacks who resided together, were often related, and whose lives together revolved around production, distribution, and reproduction (Franklin,1997:54). By focusing on bounded small social units, it is possible to observe the activities of a small group of enslaved

laborers and to compare and contrast these observations with other households within the same slave community. Using archaeological data in which it was possible to isolate four spatial and temporal periods of occupations of roughly 20–30-year intervals, Gary Fesler (2004) examined the transformation of slave households in the Utopia slave quarter from the 1675 to 1775. He observed physical changes in slave houses and artifact usage that corresponded to changes in slave household structure, from unrelated co-residents to households of kin-based members.

Household archaeology offers a new framework for analyzing some aspects of slavery. Its application, however, may be limited to slave societies that favored conditions for slave household formation, which was a situation that was absent on many plantations, particularly in Latin American and the Caribbean, where natural increase in slave populations was at times minimal, and severe sexual imbalances between male and female slaves often inhibited family formation. Nevertheless, the use of household archaeology, as well as archaeological studies of African American gender (Galle and Young, 2004), elevates the potential for robust social analyses in African Diaspora archaeology.

Brazil

The first archaeological study focusing on slave houses, known in Brazil as *senzalas*, was published only in 1993 (Lima et al., 1993). This investigation examined Fazenda São Fernando, a nineteenth-century coffee plantation located in Vassouras, Rio de Janeiro (Fig. 1). Lima and her colleagues (1993:186) assumed that the ways of life on this plantation resulted from the interaction of two polarized social segments: masters and slaves. Based on this premise, they carried out excavations in different areas of the plantation, including the *senzalas*, the location of which was well known. The objective of this research was to examine the sociocultural practices of enslaved people under the oppression and subjugation of the slavery, as well as the identification of their survival strategies through material culture. Excavations of this site revealed a *senzala* consisting of a pavilion, an elongated building subdivided into smaller units, located a few meters from the great house. This kind of *senzala* and its proximity to the great house was common on the coffee plantations from the southeastern Brazil. Excavations were conducted in three sections of the building and in surrounding areas. Results, however, were disappointing, in that they yielded few ceramic and glass fragments from the floor level, and construction debris from the collapse building.

Current investigations on *senzalas* include the study of a stonewalled *senzala* from southern Brazil (Machado and Milder, 2003), a group of plantations from Mato Grosso, western Brazil (Symanski and Souza, 2001), and two plantations from Goiás, central Brazil (Souza, 2001). Symanski (Symanski, 2002; Symanski and Souza, 2001) identified a slave house type from archaeological sources that historical evidence suggest was the most popular type of *senzala* in Brazil: a small wattle-and-daub building with one or two rooms (Slenes, 1999:149–180). These houses were covered with thatched roofs and resembled the eighteenth-century slave houses excavated in South Carolina (Ferguson, 1992:63–82) and various regions from the Caribbean (Armstrong, 1990:101–112, 1998:383–387; Armstrong and Kelly, 2000, 383–384; Pulsipher and Goodwin, 2001:192–194; Singleton, 2005, and this chapter). Based on documentary information that indicates a hierarchical arrangement of housing according to the proximity of the housing to the planters' house, Symanski established correlations between archaeological deposits and places occupied by the planter, overseers/aggregates, and slave laborers. He analyzed the recovered materials using these hierarchal relationships as a basis for evaluating access to the material resources, as well as to examine the ways in which the three groups used the material culture to negotiate their social and cultural roles in plantation spaces.

Souza (2001) conducted investigations in central Brazil that focused on the cultural transformations experienced by slaves during the eighteenth and nineteenth centuries. At the site of Fazenda Babilônia, a sugarcane plantation dating to 1800, he investigated a previously identified group of *senzalas* with a pavilion, which was shaped as an inverted "L." In contrast to Fazenda São Fernando, as previously discussed, excavations carried out in the *senzala* of this plantation revealed a large

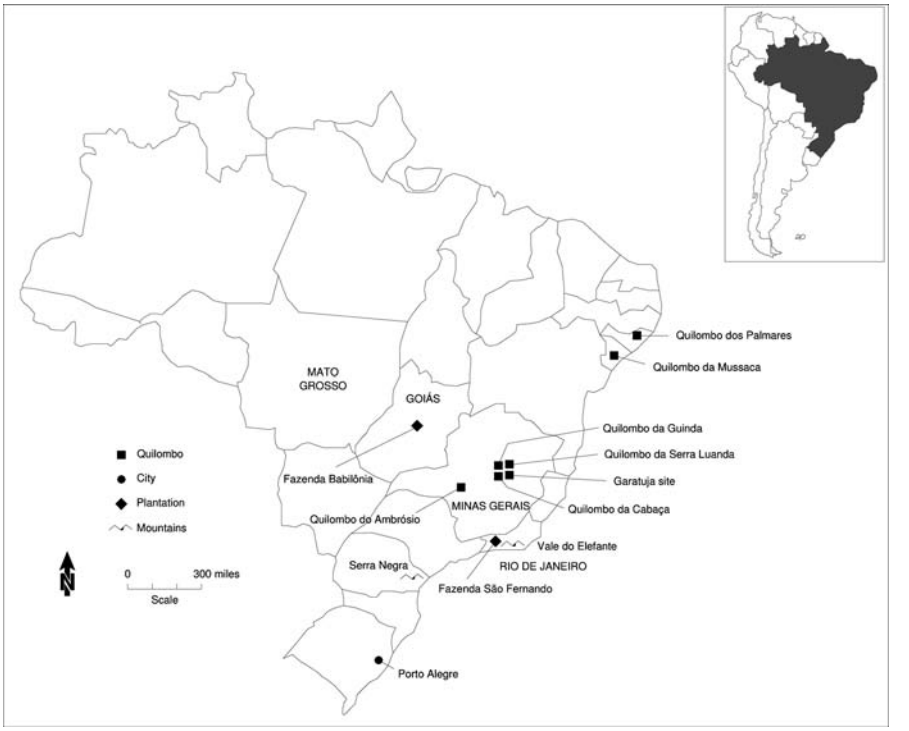

Fig. 1 Map of Brazil showing locations referred to in the text

concentration of artifacts in a deposit corresponding to the floor level. A hearth area, ceramics, metal, and glass, along with large fragments of faunal remains were recovered from this deposit (Souza, 2001). Artifact analysis is ongoing, but preliminary findings suggest intensive use of the inner area of *senzalas* for meals and socializing. Exploratory test pits placed in the front and rear areas of the *senzala* yielded a surprisingly low density of artifacts. This result was unexpected because this Fazenda had a slave population of more than 100 during the first 15 years of its occupation (Costa, 1978:66). Although it is possible that the enslaved laborers of this plantation deliberately chose to use the inner area of the *senzalas* as a place of interaction, it is more likely that the scarcity of artifacts surrounding the slave houses was the result of the slaveholder's effort to keep areas around the *senzalas* clean and free of garbage. This assumption is plausible because the central places in the Brazilian plantations, known as *terreiros*, were commonly used for slave activities (Ribeyrolles, 1941:39; Saint-Hilaire, 1938:50). Travelers' accounts also describe Fazenda Babilônia as clean and disciplined, a characteristic that is attributed to the diligence of the owner, Joaquim Alves (Saint-Hilaire, 1975:98–99). Additional evidence of slaveholder's control of slave space is provided by the use of pavilions for *senzalas*, which slaveholders had built to create an ordered space that inhibited slave decision-making concerning their housing.

The investigation of particular classes of artifacts supposedly associated with enslaved people has also been the subject of more recent interest in Brazilian historical archaeology. Among these studies, the absence of artifact studies traditionally associated with enslaved people such as beads, which are rarely found in excavations, and religious items is noticeable. In the latter case, only two studies examine artifacts of a religious nature. In the first, a *figa*, or religious amulet, a coin, the figure of a raising sun, and images of saints and Jesus Christ were recovered from excavations carried out in an extant building located in a cemetery that belonged to a mining company in Minas Gerais, where a significant number of enslaved laborers worked (Junqueira, 2002:118–119). The results of this research, however, remain unpublished. In the

second, investigation of sites from Mato Grosso, western Brazil, Symanski and Souza (2001:151–155) found nineteenth-century ceramics and bottles close to some graves in one cemetery. In the inner area of the plantation's great house, a pottery receptacle with a coin inside was found in one corner of the building, and two bottles placed side by side in a vertical position were recovered below the floor level. The authors interpreted these finds as evidence of African-influenced symbolic and ritual practices.

Other types of artifacts analyzed include recycled glass, clay pipes, and pottery. The correlation between slaves and recycled glass was primarily established through archaeological data. After identifying fragments of glass showing evidence that they were deliberately prepared to produce a sharp edge from sites at Porto Alegre in southern Brazil, Symanski and Osório (1996:47–51) suggested that these artifacts were possibly used by low-income groups or enslaved people. Similar recycled glass objects have been found at sites occupied by other people of African descent in Cuba (Singleton, 2005:195), Jamaica (Douglas Armstrong, personal communication, 2004), and Louisiana (Wilkie, 1996). Correlations of other classes of artifacts with enslaved people have been based primarily on historical accounts. This is particularly true of pipes, which according to historical descriptions were widely used by enslaved people in Brazil (Agostini, 1998a:124–128; Vianna, 2000:3–7). Historical evidence has also been used to support correlations of pottery with slave use, especially cooking pots (Agostini, 1998b:20; Souza, 2002:77–78), and in the production and trade of pottery (Jacobus, 1997). Enslaved people were responsible for much of the craft production in Brazilian society (Agostini, 1998a:132–133; Souza, 2002:77–78). Studies of slave craft production have shown that understanding the social and economic contexts within which these artifacts were produced contributes to explaining the degree to which enslaved people influenced the shape, decoration, and function of these artifacts and, consequently, their agency within the institution of slavery.

With increased interest in associating artifacts with slave groups, issues pertaining to the cultural distinctiveness of enslaved people became a central focus. In studies of pipes, analyses sought to identify African influences and specific African cultural affiliations. Agostini (1998a:128–134) suggested that enslaved people used anthropomorphic and geometric patterns on their pipes to express differences among slave groups and between enslaved people and slaveholders in her study of pipes from Rio de Janeiro. Vianna (2000) examined a post-1730 ethnographic collection in the Museu Nacional of Rio de Janeiro, and associated decorative and formal attributes of some pipes with slave daily life and religious practices, using analogies with African pipes. A similar approach has been used in studies of pottery. Jacobus (1997:74) correlated incised pottery with Bantu groups in his investigation of an outpost in southern Brazil. An examination of pottery from a eighteenth-century mining village in central Brazil suggested that slave crafters used African aesthetics on pottery to establish and demarcate their cultural differences (Souza, 2002). Similar conclusions were suggested by Symanski and Souza (2001:131–151) in their study of pottery from plantations in Mato Grosso. As a consequence of these artifact studies, which focused on pottery and pipes issues, have been raised regarding the creation of slave identities (Symanski and Souza, 2001:131–151), resistance (Agostini, 1998a), and the relationship between ethnicity, gender, and cultural difference (Souza, 2002).

The studies described above emerged from a growing interest in the archaeological study of disfranchised peoples that began in Brazil after the 1980s. These studies were oriented to demonstrate the distinctiveness of slave groups and their ability to shape their own experiences through material culture. Such studies signaled an important change from previous discussions. Prior to the 1980s, enslaved people were viewed simply as an element in the process of miscegenation that began with the Portuguese colonization. For example, in 1964, Dias (1964:10) analyzed a small sample of pottery from caves located in the "Vale do Elefante," Rio de Janeiro, identifying two types in this sample including: (1) the *cerâmica colonial* (colonial pottery), lead-glazed ceramics; and (2) the *cerâmica cabocla* (caboclo pottery), allegedly an imitation of the colonial model, considered "more evolutioned." The concept of *caboclo*, which expresses a racially mixed origin between whites and Indians, was later changed by the term *neobrasileiro* (Neo-Brazilian), intended to capture the nature of these artifacts,

presumably resulting from the mixture of cultural characteristics from Europeans, Indians, and Africans. This pottery also acquired the status of a "cultural tradition" (Brochado et al., 1969; Chmyz, 1976:145; Dias, 1988:10), a term that was used to define a type of artifact persistent in time. From a theoretical perspective, this assumption is identified with the culture history school of archaeology, which was mainstream in Brazilian archaeology from the 1960s to the 1980s and remains a significant trend in the country today. Within this archaeological framework, which was strongly influenced by Boasian anthropology, it was not difficult for scholars to accept the concept of miscegenation for Brazil that championed by sociologist Gilberto Freyre, who was a student of Franz Boas. Freyre (1943 [1933]) suggested that Brazilian culture was molded by the melting of different influences, including Indians, Africans, and Europeans, and his notion of "racial democracy" considered this interaction harmonious. Later, Freyre's ideas became the official ideology of the military dictatorship, and consequently, archaeologists used this concept to frame their interpretations of Brazil's historical past. Only after the end of the military dictatorship, and increased inspiration from Anglophone archaeology pertaining to the archaeological study of disfranchised people, did Brazilian historical archaeologists begin incorporating the idea that slave groups were culturally distinct from other Brazilians.

Cuba

Archaeological research has been undertaken at Cuban plantations primarily for the purpose of architectural restoration and the interpretation of historical-period sites. Plantation archaeology has been particularly important in designating official landscapes for commemorating Cuban's plantation heritage at two UNESCO World Heritage sites—the valley of sugar plantations in Central Cuba (Angelbello Izquierdo, 2003) and the archaeological landscape of the first coffee plantations in southeast Cuba (López Segrera, 2003). National heritage sites include plantation ruins in the Sierra del Rosario in Pinar del Rio (Tabío and Payarés, 1968), the westernmost province of Cuba; Angerona, a former coffee and later sugar plantation in Havana province (Enrique Alonso, personal communication, 1997); and La Isabelica (Boytel Jambú, 1962), near Santiago in southeastern Cuba (Fig. 2 illustrates locations). Archaeological research is still ongoing at some of these sites (Angelbello Izquierdo, 2003), therefore, archaeological reports of the research are not yet available.

Archaeological study of Cuban plantations strictly for research purposes has been undertaken at very few sites, and in these works, slave houses have been the primary focus of study. Cuban slave houses were of two very broad categories: (1) *bohíos,* or small, detached, timber-frame, post-in-hole buildings (equivalent to slave cabin or huts) with thatched

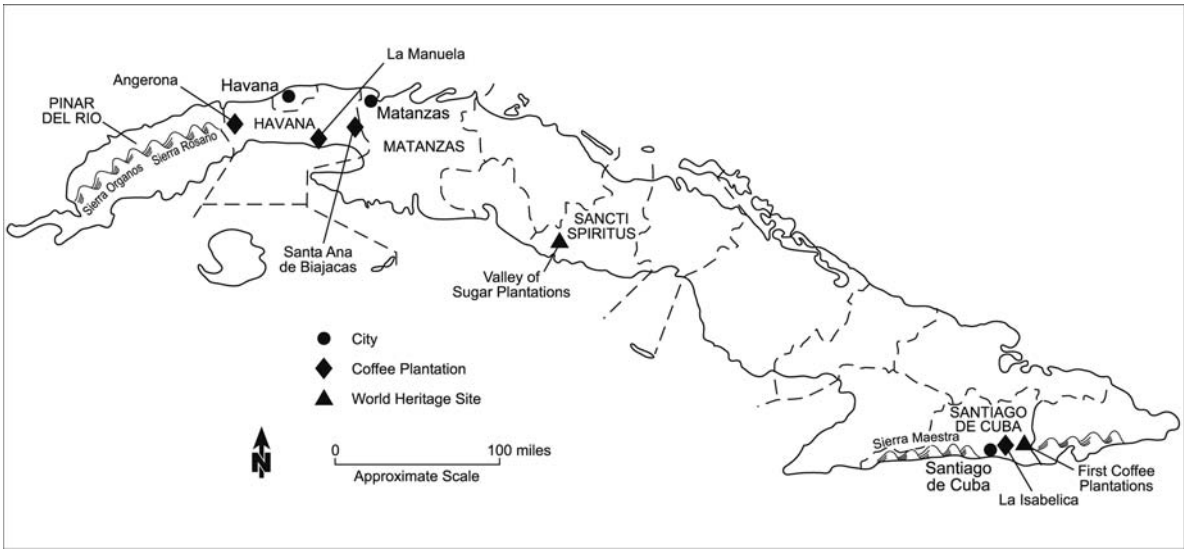

Fig. 2 Map of cuba showing locations referred to in the text

roofs in which the walls are made of clay, wood, or reeds; and (2) *barracones*, which are usually masonry buildings of varying sizes and shapes (some were similar to the previously described L-shaped *senzalas* of Brazil), which were subdivided into one-room cells or cubicles that housed a group of enslaved laborers. Cells of *barracones* were sometimes referred to as *bohíos* (Domínguez, 1986:276; Moreno Fraginals, 1978:2:74), and in common Cuban parlance the word *barracón* is often used to denote any type of slave quarter. Needless to say, the terms *bohíos* and barracones are confusing when they are simply used, and buildings to which these terms refer are not described. Both archaeologists and historians have written on Cuban slave housing, framing their discussion around several recurrent questions: When did *barracones* begin to appear on plantations? To what extent did they coexist with and/or replace *bohíos*? How widespread were *barracones*? Influential works on Cuban slave housing propose that *bohíos* were first used for slave housing and they were later replaced with *barracones* with the *barracón de patio*—a large rectangular structure with a central yard area known as a *patio*—appearing in the 1850s on sugar plantations, following attempted slave insurrections (Moreno Fraginals, 1978:2:67–75; Pérez de la Riva, 1975:21–46). The *barracón de patio* was believed to have facilitated better surveillance of slave activities than *bohíos* or other forms of *barracones*. Historian Manuel Moreno Fraginalis (1978:2:67–75) associated the transition from *bohío* to *barracón* with changes in the character of Cuban slavery, from a paternalistic form of slavery to a prison-like form of slavery. Studies of documentary records, including plantation plats and other visual sources of specific plantations, however, suggest *bohíos* persisted in many settings (Roura Álvarez and Angelbello Izquierdo, 2007; Scott, 1985:17–19), and the presence of *barracones* on both coffee and sugar plantations often predated the 1840s by two or more decades (Cremé Ramos and Duharte Jiménez, 1994).

Archaeological studies have contributed to discussions of Cuban slave housing by documenting types, sizes, shapes, and construction materials found on specific plantations. At the site of the coffee plantation, *La Manuela*, located near the south coast of Havana province, Luciano Bernard, Victor Blanco, and Alexis Rives (1985) studied the standing masonry ruins of the plantation, and compared their above-ground archaeological observations with inventories of the plantation. They concluded that the ruins of the *barracones* were typical of the construction of a *barracón de patio*, and estimated that they contained a total of 40–44 cells for housing approximately 160 enslaved workers that once lived on the plantation (Bernard Bosch et al., 1985:70). Their research also documented the presence of a *barracón de patio* on a coffee plantation, a finding that goes against historiography suggesting that the *barracón de patio* was restricted to sugar plantations. At Taoro, the Cuban Academy of Sciences excavated a *barracón de patio* that contained approximately 60 cells for housing more than 200 enslaved workers. Test excavations in the *patio* yielded a variety of objects: pipes, beads, bone buttons, amulets, kitchen wares, tablewares, and other objects (Domínguez, 1986:276)

The prevalence of standing masonry ruins amplify the former presence of *barracones* whereas evidence of *bohíos* requires subsurface testing because these impermanent structures were made from more perishable materials than *barracones*. Archaeological excavations conducted by Singleton at Santa Ana de Biajacas or Viajacas—a nineteenth-century coffee plantation known today as El Padre—yielded postholes (holes dug to support timber posts) of several *bohíos*. The entire slave settlement was curiously enclosed within a tall masonry wall measuring 3.35 meters (about 11 feet), and plantation inventories suggest that there were at least 30 clay-walled *bohíos* with palm-thatched roofs within the wall enclosure. At its peak, approximately one-hundred enslaved workers resided at the plantation (Singleton, 2005). Placing slave *bohíos* within a walled enclosure has not been described in the secondary literature on Cuban slave housing. Singleton believes the walled enclosure served both aesthetic and functional purposes. The wall most likely made running away from the plantation more difficult, as well as hindered small bands of runaways from entering the slave settlement. Slave runaways periodically raided plantations for supplies and sometimes took a few enslaved people with them (Singleton, 2001:106). The enclosure also possibly served to hide and separate slave houses perceived as unattractive or untidy in appearance from the formal areas of the plantation. Coffee

plantations were considered the most beautiful of all Cuban farms and plantations (Sosa Rodriguez, 1978:80). The plantation *batey* (the main group of plantation buildings, including the great house, outbuildings, and mills) was purposefully located within natural landscapes to take advantage of the commanding views of the surrounding countryside. Coffee plantations, therefore, became showplaces for slaveholders to entertain. The hilltop location of Santa Ana de Biajacas was described as "a natural amphitheater" (Álvarez Estévez, 2001:60) that presumably could be seen from a distance. The wall was sufficiently high to screen the slave houses either from close-up or distant vantage points. More subtle techniques of concealing slave housing have been observed in other plantation societies, wherein slaves quarters were simply placed out of view from the great house, formal gardens, and other buildings of the administrative center of the plantation (Epperson, 1990; Mathew Reeves, personal communication, 2005).

Archaeological study of Santa Ana de Biajacas is designed to move beyond descriptions of slave housing to examine how enslaved Cubans lived within their quarters and how they acquired, produced, and reworked objects for personal and household usages. This research is a baseline study to begin analysis of Cuban slavery from archaeological sources and underutilized archival collections located in both Cuba and the United States. Unlike research undertaken in the United States and Brazil, artifact analyses have not been foregrounded in Cuban plantation archaeology. The emphasis has been placed on studies of architecture and plantation layout. Occasionally, specific artifacts recovered from slave contexts are highlighted in other works (Domínguez, 1999:32; La Rosa Corzo, 1999:113). Excavations at Santa Ana de Biajacas have provided information on personal and household possessions, recreational activities as seen in games, access to tobacco, alcoholic beverages, personal adornment, and furnishings. Some of the artifacts recovered from Santa Ana de Biajacas are similar to those found in Brazil and the United States, such as scrapers made from recycled glass, gaming discs made from recycled ceramics, glass beads imported from Bohemia, and European-made ceramics and pipes. Locally made pottery and pipes are virtually absent with the exception of two fragments of a low-fired, coiled-made earthenware comparable to pottery found on maroon sites (La Rosa Corzo, 1999). The presence of locally made pottery and pipes at maroon sites and their absence at the coffee plantation may be an indication of the slave community's ability at Santa Ana de Biajacas to barter or purchase items from local traders. An important secondary goal of the project is to examine the informal economy within which enslaved Cubans were engaged in order to shed light on the extent to which enslaved people were able to shape their material lives beyond items provisioned to them.

Self-Emancipated Communities

From the very beginning, enslaved people sought to free themselves. As early as 1502, on the island of Hispaniola, Spanish chroniclers noted that an African captive accompanying them fled to the Indians, and he became the first documented maroon in the Americas (Price, 1979:1). Maroon communities developed throughout the Americas, but they are best known outside of North America, particularly in the Caribbean and South America. These communities were generally located in harsh physical environments difficult for slave catchers to access such as mountain ranges, swamps, or tropical rainforests. Most maroon communities were destroyed during the time of slavery by armies or slave catchers. In some places, particularly in Jamaica and Suriname, communities descendant from slave runaways have survived until the present.

Brazil

Quilombos, self-emancipated communities created by slave runaways, were widespread in Brazil (Moura, 1989:13–14). They were considered a serious threat to the institution of slavery; therefore, they were subjected to a legal and military apparatus for their annihilation (Guimarães, 1988:63–99; Schwartz, 1987:67–71). Historians have offered different explanations for their origins. Some have viewed them as reactions against the violence and

deprivation of freedom; others see them as an inherent part of slavery. Yet others have suggested that they countered slaveholder efforts to acculturate enslaved people, and one interpretation sees them as political endeavors against the colonial apparatus (Guimarães, 1988:17–20). *Quilombos* could vary from very small settlements, frequently located in caves, to complex webs of settlements or villages, and could be located close to urban areas or in inaccessible areas, strategically hidden by mountains or other environmental barriers.

Guimarães and Lanna (1980) investigated five sites as part of a long-term project that examined the eighteenth-century *quilombos* from Minas Gerais, an important mining area in colonial Brazil. Examining both historical and archaeological evidence related to *quilombos*, Guimarães suggested that *quilombos* represented a contradiction to slavery because, in its political dimension, they were a denial of the efficacy of slavery (Guimarães, 1988:15).

Guimarães studied a series of rock paintings produced by charcoal that included the representation of a human figure showing cruciform facial scarification from the Guaratuja site (Guimarães and Lanna, 1980:164), and a series of representations from the Quilombo da Cabaça, including a battle scene, a European ship, and a *banguê,* a device for transporting a person, composed of a net and suspended by a tree branch held by two men (Guimarães, 1992:214–215, 2001:45–48). The image of a European ship (Fig. 3) is significant, considering that these sites were located many miles from the sea. Analyzing the depictions from the Quilombo da Cabaça, Guimarães identified an array of possibilities about the meanings of these representations, but suggested that, as a whole, they may be understood as a process of overcoming enslavement. He interpreted them as the succession of phases in the life cycle of an enslaved person: capture/enslavement, the middle passage, slave work (expressed in transporting slaveholders in *banguês*), running away, and, finally, their repression (Guimarães, 2001:215).

Although only exploratory excavations were carried out by Guimarães in the *quilombos*, which were located in caves, he identified some architectural evidence at these sites, including a fence wall in the Quilombo da Serra Luanda and a series of terraces in the Quilombo do Guinda (Guimarães and

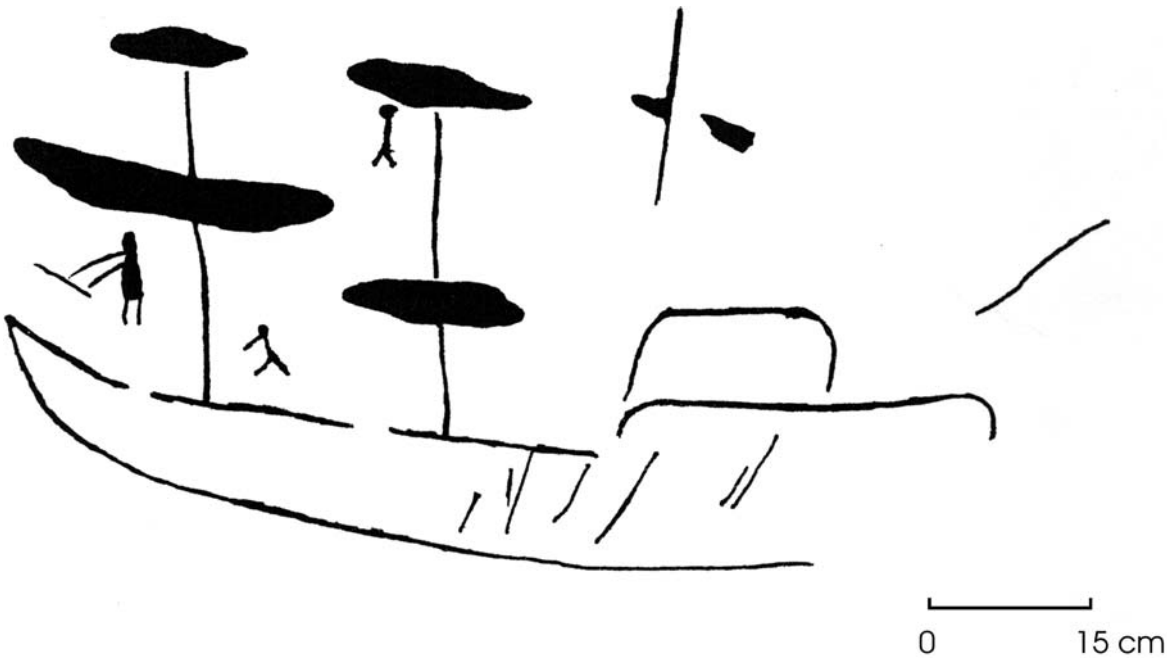

Fig. 3 Representation of a ship from Quilombo da Cabaça, Minas Gerais, Brazil (after Guimarães, 1992:218; reproduction authorized)

Lanna, 1980:154–156). More extensive excavations were carried out in the Quilombo do Ambrósio, an open-air site that Portuguese authorities destroyed in 1746. At this site, a horseshoe-shaped ditch used for defensive purposes and vestiges of house structures were identified (Guimarães, 2001:39–42, 1990:170–173).

Another project devoted to the study of *quilombos* was carried out at Palmares by Orser, Funari and collaborators. Palmares, one of the largest communities of runaway slaves in Brazil, was created in the beginning of the seventeenth century and only destroyed after almost a century of occupation. According to documentary records, between 1,000 and 6,000 people lived in its different communities. These records also indicate the existence of houses, streets, chapels, statues, granaries, and palaces in Palmares (Funari, 1999a:312–316).

The research in Palmares produced a considerable amount of publications (Allen, 1998, 2001; Funari, 1991, 1994, 1995a, 1995b, 1996a, 1996b, 1996c, 1996d, 1996e, 1997, 1998, 1999a, 1999b, 2001, 2003a, 2003b; Orser, 1994, 1996; Funari and Orser, 1992; Orser and Funari, 2001). In its scope, it makes use of the global perspective proposed by Charles Orser (1996), which sought to examine different scales of interaction between the populations from Palmares with Europeans and Indians. The research at Palmares has dealt with issues of cultural difference, ethnicity, race, and resistance.

Palmarinos interaction with Europeans was suggested from the presence of European wares at the investigated sites (Orser and Funari, 2001:67). Locally and regionally produced pottery found at all 14 sites investigated (representing 91 percent of all ceramics recovered from these sites (Funari, 1999a:317) generated more comprehensive discussions than the other artifacts. A debate developed around the presence of Indian pottery on Palmares sites, which was presumably contemporaneous with the period when these sites were *quilombos*. Orser (1994:13) suggested that these artifacts are associated with particular ethnic groups. In a more recent article, Funari (2003a) emphasized the heterogeneous nature of the population of Palmares, which ultimately would be associated with the pottery recovered during its excavation. Diversity, for Funari, does not necessarily imply a negative sense of community in Palmares. Instead, he argues that solidarity may imply a sense of friction, divisions, or even inner contradictions (Funari, 2003a:87). Scott Allen (1998) conducted a comprehensive study of the pottery from Palmares. He refuted the idea of a syncretic Palmares, as well as its characterization as an African community, because he suggests such interpretations are based upon static notions of ethnicity. Allen sees the pottery as an expression of separation from the colonies, allowing Palmarinos to emphasize their difference, while maintaining relationships at various levels with the colonial society.

Additional archaeological findings at Palmares include a possible defensive palisade found in one of the excavated sites, a hearth area, postholes (Funari, 1996a:38–42), and decorated clay pipes. Orser (1996:123–129) suggested that the decorations on the pipes had symbolic meanings; for example, pipes with images of palm trees gave origin to the name of Palmares, "proclaimed that the rebel kingdom existed, and as such was a constant reminder that colonialism was not all pervasive" (Orser, 1996:128).

Current studies of *quilombos* include continuing research at Palmares led by Scott Allen and a team from the Universidade Federal de Alagoas, as well as a landscape archaeology study undertaken by Regina Santana at the Quilombo da Mussuca, located in Sergipe, in northeastern Brazil (Tania Andrade Lima, personal communication, 2005).

Cuba

Like Brazil, sites associated with slave runaways are very diverse and range from small temporary occupations to well-established villages. Cuban archaeologists distinguish between two general categories of maroon sites based upon definitions assigned to runaways in nineteenth-century documents: (1) *cimarrones,* or small groups of slave runaways, who wandered about the countryside (also translated as vagabond runaways by La Rosa Corzo [2003:6–7]); (2) and *palenques,* or groups of slave runaways who established permanent settlements and practiced some form of horticulture (La Rosa Corzo, 1991:64). Archaeological investigations have been undertaken at sites of both *palenques* and *cimarrones*.

Palenques investigated archaeologically are located in the extreme eastern and western regions of Cuba. Using diaries kept by slave hunters, oral traditions, and material culture, Gabino La Rosa Corzo (2003:240–243) was able to locate the sites of two *palenque* settlements, Cuchillas del Toa and Todas Tenemos in eastern Cuba. At Cuchillas del Toa, he found 14 floors of the 26 dwellings believed to have been there, as well as the remains of cooking hearths. At Todas Tenemos, he identified 17 floors of the 59 houses mentioned in a diary, which contained a description of the slave-hunting militia attack on the settlement in 1848 (La Rosa Corzo, 2003:240). Although drawings of the two sites revealed differences between the two settlements, there was a similarity in the concentration of dwellings in a small area and the clusters of dwellings appear to be laid out to form inner squares and inner paths leading from one cluster of dwellings to another. Analysis of the artifacts recovered from the two sites is discussed in an unpublished archaeological report (La Rosa Corzo, 2003:243).

Enrique Alonso located and identified approximately 120 maroon sites through site surveys in the Sierra de Organos and Sierra del Rosario, in Pinar del Rio, the westernmost province of Cuba. All of the sites were located within caves, and he assigned a site as either *cimarrón* or *palenque* based on its size, evidence of horticulture, and approximate duration of occupation. He collected numerous artifacts from surface deposits, including iron cooking pots, handmade pipes, food remains, combs, imported ceramics, buttons, and bed frames (twigs assembled together to form a bed). He also observed examples of rock art, which he believes to be the work of slave runaways, rather than that of past indigenous populations because the motifs and designs are very different from the mural art that Amerindians produced in Cuba (Linville, 2005). Based on the recovered artifacts, he suggests that the vast majority of these sites date to the first third of the nineteenth century (Enrique Alonso, personal communication, 1997).

Archaeological investigations of *cimarrón* sites have also been undertaken in mountainous regions in the Habana and Matanzas provinces. La Rosa Corzo has identified 25 sites found in caves and rock shelters that he believes to be associated with small groups of *cimarrones*. Some of these sites are not far from the site of the coffee plantation at Santa Ana de Biajacas (La Rosa Corzo and Pérez Padrón, 1994:105). Recovered artifacts represent a combination of handmade items, including earthenware pots and pipes, wooden combs and tools, weapons, bottles, and imported ceramics that were most likely taken from nearby plantations. Analysis of food remains from five sites indicates that the animal foods in the diet of *cimarrones* included pigs, chicken, cows, ducks, dogs, horse, *hutías* (a local rodent), and *majá* (Cuban boa). La Rosa Corzo (2003:177–178) believes domestic animals were taken from plantations, whereas nondomestic food stuffs were obtained from exploiting the surrounding forests. He further suggests that the consumption of dog may be related to African traditions. Consumption of dog meat was suggested from the recovery of charred dog remains found in and around a hearth. Additionally, a historical source describes dog consumption among enslaved Cubans of the Arará *nación* (an ethnic designation derived from the slave trade for people taken from present-day Republic of Benin) in the eighteenth century (La Rosa Corzo, 2005:177–178). La Rosa Corzo's research on *cimarrones* is ongoing, and in addition to publications focusing on the archaeological research, he has coauthored a publication of slave-hunters' diaries (LaRosa Corzo and González, 2004). These documents describe slave-hunters' pursuit of slave runaways.

United States

There is a tendency to think slave runaways within the United States were only able to emancipate themselves if they fled north via the underground railroad to states where slavery had been abolished or to Canada. Maroon communities existed within the slave South, and many of these were established during the early days of English colonization of mainland North America. Unfortunately, we know very little about these communities from either archaeological or historical sources. Slave runaways sometimes sought refuge among friendly Native Americans, and in time, were absorbed within these communities. Other Native Americans posed a threat to runaways because they established

alliances with slaveholders and served as slave catchers (Mathis and Weik, 2005).

Archaeological research initiated at maroon sites in the United States has been exploratory at best, and the greatest contribution of this research at this point is the identification of potential archaeological sites and assemblages for future research. Perhaps, the best known long-term refuge for slave runaways in the southeastern United States was the Great Dismal Swamp located in eastern North Carolina and Virginia. Elaine Nichols (1988) conducted a preliminary survey of a maroon site located on Culpepper Island, a marsh island within the vast swamplands, and identified areas of high dry land, which she believes were most likely the location of maroon settlements. She recommended that these areas be tested in future archaeological investigations.

Florida became a significant haven for enslaved people escaping plantations in South Carolina and Georgia when it was a Spanish colony from the sixteenth to nineteenth century. In 1693, the Spanish Crown granted freedom to slave runaways who made their way to Florida, provided that they converted to Catholicism and assisted the Spaniards in their defense of Spanish Florida. In time, a military fort and town were established known as Gracia Real de Santa Teresa de Mosé, or simply Fort Mosé, about two miles north of St. Augustine, Florida. The settlement consisted of about 87 freed black males and their families. Excavations yielded few artifacts that dated to the Mosé period, but these few objects suggest a stronger reliance upon English-produced goods than at sites excavated in St. Augustine (Deagan and Landers, 1999). Faunal analysis indicated a diet that was heavily based on fish and shellfish, which was comparable to the diet of local Native Americans (Reitz, 1994). Perhaps this is an indication of Native American interaction with the Mosé population.

Black Seminoles were another group within Florida that consisted of slave runaways. Although the nature of their relationship with the Seminoles is unclear, they lived in separate villages near the Seminole Indians and are described as runaways according to documents (Mathis and Weik, 2005:287). Terrence Weik conducted preliminary excavations at the Black Seminole site of Pilaklikaha, an important Black Seminole town in Central Florida, to which maroons migrated during the nineteenth century. He discovered that undertaking Black Seminole archaeology poses challenges because the Black Seminole may have reoccupied Seminole sites; therefore, sorting out the differences in the material culture of the Black Seminole and the Seminole is problematic. Despite this difficulty, Weik (2004:41–44) contends that the archaeological study of sites like Pilaklikaha permits archaeologists to examine and understand the processes of Afro-maroon and Amerindian interaction, cultural exchange, and ethnogenesis.

Summary and Conclusions

The archaeologies of the African Diaspora in Brazil, Cuba, and the United States emerged for diverse reasons and have followed different trajectories in their development. Each has been entangled in sociopolitics that have influenced, to some extent, orientations to the study of the African Diaspora, although these influences are more often implicit, rather than explicit. This does not mean that other factors have not contributed to the development of this research, but there is a relationship between greater social and political issues and the concerns of these archaeologies.

In Brazil, constraints imposed by the military dictatorship and the interest in the diversity of the society had a close relationship with the problems addressed by archaeologists in recent decades. Studies proposing correlations between pottery and slave groups reveal broader issues of national identity that have permeated major archaeological debates and interpretations. The long-term discussion of the consequences of miscegenation in the constitution of the Brazilian people (Marx, 1998:65; Dutra, 2000:26) produced several influential studies (Freyre, 1943; Hollanda, 1936; Martius, 1991 [1843]; Ribeiro, 1996; Vianna, 1933) that ultimately contributed to shaping a vision of Brazilian national identity. The impact of these studies is clearly reflected in the divergence between Dias' (1964, 1988) understanding of pottery from historical sites as a syncretic product, deriving from a mixture of multiple sources, and the search for distinctiveness in slave material culture, in more recent

discussions. Struggles associated with the effects of miscegenation are also evident in Scott Allen's (1998) interpretation of pottery from Palmares, in which he sees this pottery as neither a syncretic product nor the characterization of Palmares as an "African community."

In Cuba, the archaeological study of slavery and marronage has been used primarily to examine questions to support or refute the historiography on these topics. Published studies of slavery have largely focused on slave housing, rather than analyzing artifacts recovered from these sites that can provide information on slave activities and living conditions. Slave runaway settlements, however, have received more systematic attention and rigorous analysis than slave sites. Perhaps more attention has been directed toward slave runaways because the overt resistance, struggle, and repression runaways experienced mirrors themes of Cuban national identity. Additionally, Moreno Fraginalis' (1978) influential study, with its prison-like characterization of Cuban slavery, disregarded any form of slave agency that could inspire the archaeological study of covert acts of slave resistance on plantations. Happily, Cuban historians are undertaking studies that examine slave agency and everyday resistance (Barcia Paz, 1998; Barcia Zequeira, 2003; García, 2003). Consequently, maroon sites rather than plantations became the foci for the study of Afro-Cuban resistance, or for that matter Afro-Cuban life.

Political movements initiated the archaeological study of the African Diaspora in the United States. Its continual growth, however, resulted from increased acceptance of this research as viable to understanding the history and culture of African Diaspora peoples both inside and outside the field of archaeology. African American activism and participation continues to shape some concerns of this research area, and today, African Diaspora archaeology is perceived to be the study of people of African descent in the past, as well as in the present (Franklin and McKee, 2004).

African Diaspora archaeology is developing further in each of these nations. Work is also beginning in some areas that had significant African populations in past, but today these populations are quite small, such as Argentina, Mexico, and Peru. As the exchange of ideas and approaches to the archaeological investigation of African Diasporas increases, comparative analyses of African Diasporas are likely to follow.

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On the Fringes of New Spain: The Northern Borderlands and the Pacific

Russell K. Skowronek

Introduction

Preparing a synopsis of the history and historical archaeology of New Spain's northwest frontier, not to mention its Pacific holdings, is not simply daunting, it is a Herculean task. At least hundreds of thousands of pages in thousands of books and articles have been published or are hidden in the "gray literature" on countless subjects relating to the broad historical sweep of this vast region. As a result I will limit my comments more toward generalization, and attempt to direct the reader to other, more-comprehensive sources. Omission, therefore, is not a critique.

Nonetheless, after three decades of studying the Spanish empire, from Madrid to Manila and from Labrador to Lima, I believe I have begun to understand its manifestations as a global entity and not just as a collection of sites or regions (Gitlin, 1992). This, I believe, is a crucial observation that needs to be recognized by those studying the early modern era. People lived, and largely interacted, in a single region prior to the era of European colonial expansion (e.g., Wallerstein, 1974; Wolf, 1982). Certainly, there were large, land-based empires (e.g., China, the Inka), but in every case, their holdings were largely contiguous, and they were the dominant political and economic entities in their respective regions. Whether in these empires or in smaller ranked or egalitarian polities, anthropologists have traditionally been able to examine a specific site or community largely as a self-contained entity with minimal superregional connections. Yet, beginning five centuries ago, that began to change as superregional empires that encircled the globe began to form. Each settlement in every geographical area that comprised these early modern empires was shaped by three factors: external systemic concerns, internal colonial constraints, and technological and geographical limitations. Thus, for historical archaeologists, research should neither be site nor regionally focused, for this will result in a skewed perspective vis-à-vis the relative importance of a discovery or the area. Rather, it must be considered in the larger system of which it was a part. Only then can we truly evaluate the significance of our findings.

In the following pages, a model for explaining the formulation and maintenance of the Spanish colonial world is presented. From this framework, the peripheral borderlands of New Spain will be evaluated.

Creating and Maintaining the Spanish Empire

Settlement systems reflect in their pattern and function the social structure of the constituent cultural system of which they are a part. When a complex cultural system colonizes new lands, expressly for the purpose of founding economically specialized areas whose function is to provide goods to the parent state, the new patterns associated with these colonial areas are not unvarying clones of the motherland or of previously founded

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colonies. Certain aspects of a colonial area's settlement pattern and function may grossly reflect that of the parent state. Nonetheless, a larger hierarchy exists within the colonial system and serves to differentially separate each area from the motherland. This hierarchy is based on access to desired resources and an economical means of communication with the homeland (Skowronek, 1989). In this chapter, these premises are examined against the fabric of the Spanish colonial empire of the sixteenth through nineteenth century—the nascent expression of the modern world economy (Wallerstein, 1974).

Background

Economic historians have pointed to the early modern era or age of European expansion as the birthplace of the world economy (e.g., Stavrianos, 1981; Wallerstein, 1974, 1989; Wolf, 1982). This Eurocentric view has placed Asia at the periphery of the nascent global economy. Asia was perceived to be an area that had its own insular economic focus, which later was incorporated into this western juggernaut. Others, such as Bergesen (1995:201) and Frank (1995:173, 189), have challenged this view and argued for an Afro-Eurasian world economic system of 5,000-year duration. In this Asian-centered view of history, Europe is seen as the periphery. European states wanted to participate as equal players in the Asian core but were economically, militarily, and politically too weak to challenge the East through Eurasia or southern Asia. In order to overcome these deficiencies, contact was sought to the west. Europe's capture of the Americas was seen as a prelude to the elusive prize of Asia. There they transformed the social and natural environment into a facsimile of their homeland; literally, a New Europe was created in the New World when it became part of their European-centered economy (Skowronek, 1989). While the British, Dutch, French, Portuguese, and Spanish would come to establish colonial enclaves in South, Southeast, and East Asia, China remained aloof and closed to the Europeans for the next 350 years (1480s–1830s). Their contact was limited by the Chinese to the regulated exchange of luxury goods at specific ports—a situation that left Europe at the periphery of Asia.

By turning the telescope 180° and "seeing" early modern colonialism in this light, we are able to recognize and thereby measure continuity and change as the economic pendulum shifted from Asia to Europe and as capitalism came into being.

Understanding the Manifestations of the European-Centered World Economy

The complex societies of early modern Western Europe were set apart from their predecessors by their growing economic linkages beyond the political and cultural boundaries of the region. This nascent "European-centered world economy" was established first on the importation of luxury items and later on bulk produce (Wallerstein, 1974:15–63). The basis of this "world economy" was the European "core" states' economic capture and/or political control of "peripheral" areas that produced these desired commodities. In this system, the inherently unequal economic relationships of producers and consumers that characterized these complex societies were forcefully extended, through colonialism and imperialism, to include a growing periphery of producers for the elite consumers of the core (Wallerstein, 1974:67–129, 301–344; Wolf, 1982:83–88, 101–157). From the point of view of Europe, the colonies existed primarily to produce commodities for European consumers, to facilitate their transport, or to defend the sources of the commodities (Steffen, 1980:xii–xviii). I have written at length about these issues within the Spanish colonial world and will liberally draw on this work (Skowronek, 1989, 2002) to situate this chapter.

This economy was inherently hierarchical, with producers at one end, elite consumers at the other, and various sorts of middlemen between. Thus, it is suggested that not all colonies or colonial areas occupied the same level in the hierarchy; that is, although all colonies might be part of the "periphery," there was hierarchy within the periphery. Here, the colonial hierarchy is defined in terms of the value and amount of commodities exported from each colonial area. Thus, those areas that

exported large volumes of valued commodities ranked highest in this hierarchy of the systems' periphery. In the case of Spain's colonial empire, this hierarchy is discernible between its far-flung colonies because of the different economic roles each played in the system.

Settlements in colonial areas may be characterized by emphases on particular activities. Production activities such as mining, lumbering, plantations, ranching, and fur trading (Steffen, 1980:xiii–xv) were the high-profile, lucrative aspects of the colonial enterprise. These settlements were protected and supported by military, mission, and commercial activities (Lewis 1984:264–268) that characterized various settlements. The unequal economic relationships that characterized the core societies were accentuated in their colonial extensions. The "peripheral" colonies that produced goods for the markets of "core" consumers or were central to transport enjoyed a higher frequency of commercial contact with the motherland than did those whose role was more "protective." Thus, because the nascent world economy was based on mercantilism, colonies that produced desired commodities for the motherland attracted a constant stream of merchant vessels. Colonies that produced no exportable goods did not attract merchants, and outside contact was limited to the infrequent arrival of supply ships.

A cosmopolitan colonial area's position in the economic hierarchy of a colonial system was closely related to its function in the system. Here, the systemic function is defined in terms of the production of desired commodities. Colonies that produced revenues or profits in excess of the costs of supporting their associated governmental, religious, and military infrastructure are considered "productive" and, therefore, of greater value to the motherland. Those colonies whose returns failed to outweigh expenditures attracted fewer colonists. These enjoyed less contact with the mother country and are termed "protective," as their value to the motherland and, thus, their position in the colonial hierarchy of the system, was low. Colonies that produced revenues or profits in excess of the costs of supporting associated governmental, religious, and military infrastructure are considered "productive" and, therefore, of greater value to the motherland (Skowronek, 1989:205–206).

Even with variable economic contact, the focus of both "productive" and "protective" colonies was on the motherland. This tethered the colonies closely to the political and social demands of the motherland and created what Steffen (1980:xii–xiii) has called a "cosmopolitan frontier." Thus, even in these physically remote, peripheral settings, the view of the inhabitants was "cosmopolitan" and focused outward on the "core," or mother country. A hallmark of this outward view was the creation of societal and ecological "New Europe" (Crosby, 1986:146–149). By importing animals, plants, and other material aspects of the Old World, the colonists attempted to transform or standardize their new environment into a facsimile of their cosmopolitan ideal (Crosby, 1986:172). While this transformation was most successful in temperate areas, which were climatically more similar to Europe, the transformation of the tropical environment was successful enough to attract permanent settlers (Crosby, 1986:6, 134, 172–194). In Spanish America, this transformation is apparent in Foster's (1960) concept of "Conquest Culture," in which he notes a regional homogeneity in settlement plan, architecture, foodways, and other cultural traits.

In European cosmopolitan colonization, the economic position of any area plays an important role in the settlers' ability to alter the new setting into an acceptable replication of the motherland. This ability to create a New Europe can be accomplished by physically altering the environment of the area and/or by importing material goods in a finished form directly from the Old World. Thus, those areas that produce more goods for the core enjoy greater contact with the motherland. They are better able to replicate "Europe" than are areas with less contact. Therefore, the ability of a cosmopolitan colonial area to superficially transform itself into a "New Europe" can be seen as a reflection of the success of the colony in the commercial system of the founding state.

The ability to create a "New Europe" or "New Spain" was related to the amount of commercial contact the colonies enjoyed with the mother country. Here, it was expected that the higher-valued colony would be better able to replicate the Old World. Furthermore, given the focus of this study on the European experience, it should be possible to identify the Old World antecedents for these

idealized "New Europes." The type of colony that developed and the colonial culture that evolved in these peripheral areas were the result of both economic contact with the motherland (external systemic concerns) and internal colonial constraints. The latter included the initial contact and subsequent European interactions with the environment and the aboriginal occupants of the area (Skowronek, 1989).

In the colonial world, settlement pattern is dictated by access to an economical means of communication and transportation to the motherland. Thus, coastal settlements or entrepôts require safe harbors and proximity to sea lanes, while interior settlements stand near exploitable exotica on convenient trails or navigable rivers. If settlement pattern in cosmopolitan colonies is dictated by access to an economical means of communication with the motherland, it would be reasonable to expect that a main street, or corridor, would develop from the entrepôt into the hinterlands.

Just as the settlement pattern of a colony was dictated by an economical means of internal transportation, so too was communication within the larger colonial system. No colony stood alone; each was linked by a combination of terrestrial and waterborne lines of trade and communication into a larger system. Water routes are particularly important in evaluating the development of any colonial area. In the colonial era, roads were at best abysmal affairs, constructed and traveled with great difficulty around such hostile impediments as mountains, deserts, and swamps. Even in the European core countries, the majority of commerce moved by water whenever possible.

In the development of the larger colonial system, sea lanes developed like roads given the available technology. They avoided such hostile, nearshore features as reefs and shoals, and followed the prevailing winds and currents—the routes of least resistance—to safe, deepwater harbors or colonial entrepôts at the heads of interior lines of communication. These sea lanes became de facto main streets of communication that afforded a safe and economically viable means of transportation and helped dictate which lands bordering these lanes would be exploited.

Given that cosmopolitan colonies were established to provide the motherland with goods and services, it is reasonable to expect that "main streets" of communication would develop that linked the colonies to the motherland. The settlement pattern associated with cosmopolitan colonies is dictated by an economical means of transportation with the motherland. It is reasonable to expect that the colony's entrepôt nearest the main street of communication with the motherland would be the busiest port and, therefore, would have the most contact with the core.

Because communication within the colonial system and, ultimately with the European core, was crucial to the existence of peripheral colonies, the Spanish colonies of New Spain and the Pacific exhibited a similar settlement pattern that is focused on a main entrepôt or port. This settlement will be sited to facilitate communication with both the interior and the external "main street." Other, secondary settlements will be sited near desired commodities and be linked to the entrepôt by a convenient line of communication.

The "productive"/ "protective" economic model outlined above is useful for understanding how the larger systemic issues of maintaining a far-flung, noncontiguous empire affect colonial development. When these economic issues are viewed against the communication technology of the era, the economic remoteness of the Spanish Pacific and New Spain's northern frontier colonies is obvious. These colonial areas were clearly on the "protective" end of the colonization gradient.

The Context for Spanish Colonization of the Northwest Frontier of New Spain and The Spanish Pacific

The Northwest Frontier—California, Arizona, New Mexico, and Texas

In the 1530s, with the return of the Narvaez expedition castaways, the interior of the northwest frontier of New Spain began to be revealed. These reports, following on the heels of the successes of Cortez, Magellan, and the Pizarros, spurred another round of both sea- and land-based exploration for new "El Dorados." From Florida, Hernando de Soto's

column (1539–1543) marched westward into Texas. In the same period (1540–1541), the expedition of Francisco Vazquez de Coronado headed north from Mexico and crossed what we know today as Texas, New Mexico, Arizona, and possibly the southeastern corner of California. At the same time (1542), one of Cortez's trusted lieutenants, Juan Rodríguez Cabrillo, sailed the California coast in a vain search for the mythical Straits of Anian. The remnants of the three expeditions returned empty-handed save for accounts of temperate lands and a polyglot of both nomadic and sedentary indigenous peoples.

All of these aforementioned human and geographical "assets" were in ample supply in other areas of the rapidly increasing empire. As a result of these disappointing (i.e., vis-à-vis the presence of known sources of precious metals) findings, the entire region was primarily ignored, with the exception of some sea-based charting efforts of the California shore, for the next 50 years. In fact, the period of complete neglect was to last in Arizona to the opening years of the eighteenth century, in Texas until 1716, and in California until 1769. It was only among the settled, indigenous, agricultural village-dwellers of New Mexico and the Hopi mesas of what is now Arizona that a Spanish presence was seen in the late sixteenth and seventeenth centuries.

This colonial neglect is best given context when it is viewed against the three previously defined shaping factors: external systemic concerns, internal colonial constraints, and technological and geographical limitations. As history has demonstrated, the region would prove to contain vast deposits of copper, silver, and gold, but as I have noted for New Spain's northeastern borderlands (Skowronek, 1989), the Spaniards who participated in the *entradas* were neither geologists nor prospectors. If the indigenous people did not have precious metals, there was no "science" in a technological sense for discovering same. Geographically, the region was relatively dry, mountainous, temperate in climate, and had few year-round streams. The latter shortcoming added to its remoteness from the "mainstream" of communication. In other words, it contained little in the way of natural resources to recommend it for colonial investment.

Internal colonial constraints included the relatively thin, outside of the upper reaches of the Rio Grande Valley, seminomadic populations that characterized the region. Spanish imperialism, like that of the Inka and Aztec, worked best when dealing with similar socially ranked, sedentary, agricultural societies that could be co-opted into the European social hierarchy. As in the northeastern borderlands of New Spain, the Spanish were drawn to the sedentary, agricultural chiefdoms for the majority of their colonial efforts (Hann, 1988). The most long-lasting colonial presence was among the Pueblos of the upper Rio Grande Valley. There, alliances were made and maintained against the *chichimecs* or *cimarrones*, groups we have come to know as the Apache, Navajo, Comanche, and others, which posed uncontrollable threats to both the Spanish and settled aboriginal ways of life. Thus, at the same time as Franciscan missionaries were being invited into the communities of the Mississippian chiefdoms of La Florida, the first missions, presidios, and colonial towns were established in what would become New Mexico (Kessell, 1987; Moorhead, 1975; Spicer, 1962). By 1680, New Mexico had some 2,800 colonists (Bannon, 1970:79), but beyond this there was no interest in the rest of the region.

It would be external systemic concerns that would spur the colonization of the areas of what are now Texas, Arizona, and California and turn them into a "protective" periphery of New Spain. This observation regarding the defensive nature of this region is nothing new, as generations of historians have clearly shown (e.g., Bannon, 1964, 1970; Weber, 1992). These systemic concerns stemmed from perceived threats by other European powers toward Spain's "productive" New World empire. In the sixteenth century, Spain destroyed and occupied France's nascent colony in what is now Florida because of its proximity to the route of the flota, the "main street" of communication from the "productive" heartland of New Spain (Skowronek, 1989). In the last third of the seventeenth century, France again panicked Spain when their colonies in the Illinois Country and Louisiana split the northeastern and northwestern borderlands of New Spain (Bannon, 1970:108–142). As a result of this French presence, a broad band of east Texas from the modern border with Louisiana to the area of Corpus Christi was occupied in the early eighteenth century by the Spanish, first with a string of

presidios and missions and later with settlements (Poyo and Hinojosa, 1991). A half century later, Alta California, and Arizona as a part of an overland route of communication, would similarly be occupied to forestall Russian expansion from the north and British expansion across the North American continent that ultimately might threaten the route of the Manila Galleons (Officer, 1987). At the same time as Spain was occupying California and Arizona, it gained New Orleans, Louisiana, and the western bank of the Mississippi as far north as St. Louis.

For the balance of the era of Spanish colonial control, the northwest borderlands of New Spain remained a periphery to the periphery. As a defensive march that served to protect the productive core of New Spain (Faulk and Faulk, 1988), the area enjoyed little contact with mainstream colonial culture and the Spanish homeland. Instead, a blend of colonial and indigenous culture developed on the fluid margins of the frontier there. The social order was based less on descent and more on economic prowess in the local community (Bustamente, 1991; Campa, 1979; Foote and Schackel, 1986; Ford, 1987; Frank, 1991; Jones, 1979; Weber, 1979). At the end of the Spanish regime and during the 25 years of Mexican control, areas such as California began to enjoy greater contact with the larger world. It is significant to note that this contact was not with Mexico. Rather, it was as a "Third World" producer of raw materials (hides, tallow, and furs) for nascent First World capitalists in the United States and Britain (Lightfoot, 2005).

The Spanish Philippines

The economic history of the Spanish Philippines can be divided into three distinct periods. First, an era I term the "Prelude" was a time of initial exploration and contact. This period lasted some 50 years, or from the arrival of Magellan in 1521 to the founding of Cebu in 1565, Manila in 1571, and Vigan in 1574 (Fig. 1). It is a gross injustice to decades of work of archaeologists, ethnographers, and historians to generalize about the cultural and natural environment the Spanish encountered in their sixteenth-century capture of the Philippines (Fig. 2). Any in-depth study should include a survey of the vast literature penned by Filipino and non-Filipino researchers during the last century. These may be found in a number of journals, including *Philippine Studies* and the *Philippine Quarterly of Culture and Society,* and other publications (e.g., Beyer, 1949; Bourne, 1907; Casiño, 1982; de la Costa, 1961; Hutterer and MacDonald, 1982; Junker, 1999; Keesing, 1962; Solheim, 1964).

William Henry Scott (1994) provides a reasonable synopsis of life in the archipelago during the sixteenth century. He posits that 1–2 million people called the Philippines home when the Spanish arrived. Today 80 million people live in the archipelago. In the sixteenth century, the majority were sedentary farmers of rice, millet, taro, yams, bananas, and sago that also kept pigs and chickens. These were kin-based, ranked, or socially stratified societies organized as chiefdoms. Recent archaeological evidence suggests that this level of social complexity had been in existence for over a millennium when the Spanish arrived (Junker, 1999). As a result, there is evidence for centralized craft production and specialization. Warfare was endemic, and seaborne trade was far-flung. In the tenth century, during the Tang Dynasty, the earliest documented contact with China is recorded (Alip, 1959:49; Junker, 1990:178–179). By the sixteenth century, Chinese- and Thai-made porcelain plates were ubiquitous (Scott, 1994:66), and imported ceramics, copper gongs, beads, and other trade items were as important material status markers as were rice fields and livestock (Keesing, 1962:121). Direct evidence of this Asian overseas trade was discovered in 1985 off of Palawan in the central Philippines. Known as the Pandanan wreck, it dates to the late sixteenth century and carried a cargo of porcelains and porcelaneous stonewares, glass beads, copper-alloy gongs, and other metal trade goods (Goddio, 1988).

This epoch was followed by a 250-year period of barter and plunder when the Philippines served as a commercial outpost for the famed Manila Galleon trade. For 250 years, between 1573 and 1815 (Chaunu, 1960; Cushner, 1971:127–128; Legarda, 1955, 1967:3–6; Lyon, 1990:11, 37; Schurz, 1939; Tubangui et al., 1982:89), two Spanish merchant vessels made the 14-month-long round-trip passage from Manila to Acapulco on the western coast of Mexico (Moses, 1929:75). These ships bore the

Fig. 1 Fort San Pedro, Cebu City, Cebu, the Philippines (photograph by the author, 1995)

exotica of the Far East (Cushner, 1971:128, 187; Lyon, 1990:13–14). From the Philippines came cotton goods, copper, silver, and gold. The ships also carried abaca hemp (burlap and rope), dyewoods, hides, and coconut products (copra and shell). India and Ceylon supplied taffetas, pearls, diamonds, topazes, carved ivory, and cotton goods. The Spice Islands—later known as the Dutch East Indies and today as Indonesia—shipped cloves, cinnamon, pepper, camphor, gems, and some ceramics. Indochinese imports included tin, ivory, rubies, and sapphires. Additionally, from Japan came amber, cutlery, and furniture. We know, however, from tax and port records, that the lion's share of the goods on the galleon originated in China and were borne to Manila in Chinese ships (Chaunu, 1960:148–149). Items of silk, jade, sandalwood, ivory, copper, and iron, in addition to pearls and pottery, arrived in Chinese ships (Cushner, 1971:128; Lyon, 1990:14; Tubangui et al., 1982: 51–53). As early as the Sung Dynasty (950–1279 C.E.), and for half a millennium prior to the arrival of the Spanish, Chinese merchants trafficked in earthenware pots and jars, tin, copper and iron wares, and porcelain tablewares and jars. The archaeological record testifies to the volume of this trade, as massive quantities of imported porcelains and other trade commodities have been recovered from both burial and habitation contexts throughout the Philippines (e.g., Aga-Oglu, 1946, 1948; Junker, 1990:167). Under the Spanish, the volume of silks and porcelains increased (Guerrero and Quirino, 1977:1009; Legarda, 1967:3; Mudge, 1986:39; Tubangui et al., 1982:51). The galleons returned from Mexico laden with silver, books, lace, fans, and wine for the Spanish residents of the Philippines (Alip, 1959:53; Cushner, 1971:197; Legarda, 1967:3; Lyon, 1990:36). All told, between 1 and 2 million pesos in goods annually moved between the two colonies (Cushner, 1971:134, 136).

For all of its commerce, the Philippines were an economic liability for the Spanish (Cushner, 1971:129; Legarda, 1967:14–15, 20). Even though the islands had evidenced veins of precious ores and

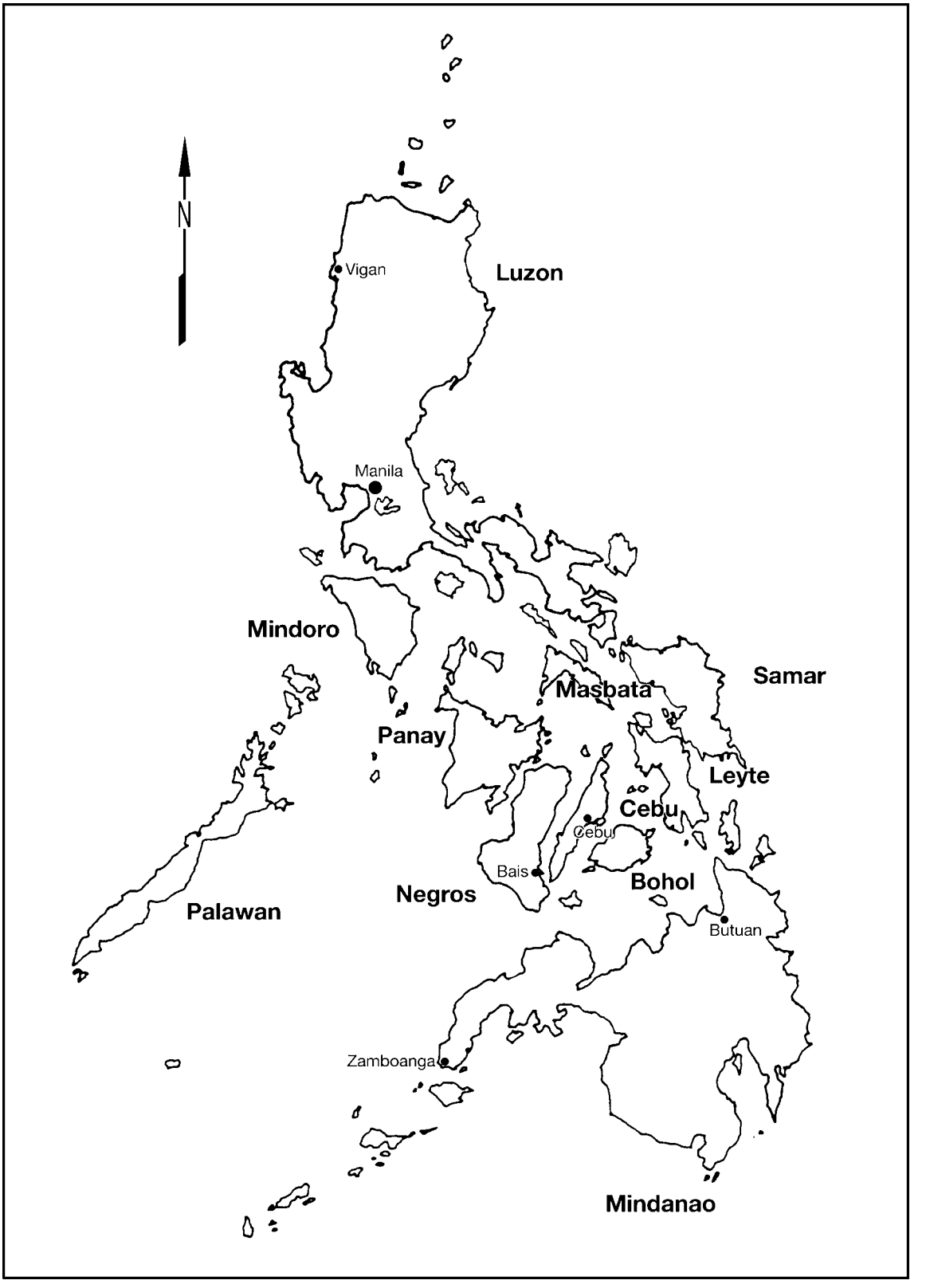

Fig. 2 Map of the Philippines

had an appropriate climate and soils for the establishment of plantations, its remote location placed it in the periphery. The colony itself was impoverished and received an operating subsidy or *situado* from Mexico—of which it was an autonomous dependency until 1821 (Bauzon, 1977:1037; Cushner, 1971:132; Moses, 1929:75; Phelan, 1967:13, 106, 154; Tubangui et al., 1982:48–50). That *situado,* plus the taxes collected in Manila and Acapulco on the cargoes of the galleon, went for the maintenance of the flota and the infrastructure of the Spanish colonial government and its representatives (Cushner, 1971:129; Tubangui et al., 1982:47). The reason for these economic shortcomings can be traced to the Manila Galleon and the position of the Philippines as the commercial middlemen for the Mexican-Chinese trade (Casiño, 1982:98). Great profits could be made in Manila brokering these exchanges without having to develop the hinterlands of the colony. Also, because plantations in the New World produced sugar, tobacco, cotton, and indigo, it was economically infeasible to compete with them for such bulk products. In the mid-nineteenth century, this would change with the advent of steam technology, the existence of the Suez Canal, and the growth of the global marketplace.

The market economy did not extend beyond Manila. In the hinterlands of the archipelago, subsistence agriculture was the norm until the last third of the eighteenth century—when the so-called Bourbon Reforms were enacted (Rafael, 1988:193). Prior to that, the Spanish presence in most of the Philippines was limited to Catholic missionaries from the Augustinian, Dominican, Franciscan, Jesuit, and Recollect Orders (e.g., de la Costa, 1961; Keesing, 1962) and a handful of soldiers at number of far-flung presidios (e.g., Fenner, 1985; Schreurs, 1983; Spoehr, 1973). At that time, Spain sought to make each colonial area more self-sufficient (de Jesus, 1980:23, 25, 57, 131; Wallerstein, 1989:239). In the Philippines, that meant ending the 200-year-old Mexican subsidy and establishing a government-regulated monopoly of tobacco, cotton, indigo, abaca, coffee, and sugar. Furthermore, the monopoly of the Manila Galleon was broken when the port of Manila began to be serviced by the Spanish-owned Royal Philippine Company.

In the wake of the Napoleonic Wars, Spain struggled to reassert royal authority over its isolated New World colonies. Yet, one by one each gained independence, so that by 1827 only Cuba and Puerto Rico remained in the empire. The Philippines, with these and other scattered colonies in Africa and Micronesia, were the remnants of formerly mighty imperial Spain. At this time, the economic focus of each of these colonies was completely redirected from mercantilism and subsistence agriculture into a plantation export economy. Ports were opened to foreign vessels, and non-Spaniards were allowed to own land for the first time.

The last two-thirds of the nineteenth century was an era of commercial capitalism based on the export of plantation produce (Legarda, 1967:11). In the Philippines, 19 years after the last Manila Galleon sailed, the Royal Philippine Company was disbanded; in 1834, Manila was made a free port for trade. This opened the door and allowed non-Spanish Europeans to own land. Thus, beginning in 1834, the Philippines were transformed into a giant plantation that produced abaca, coffee, sugar, and tobacco for export. It is significant to note that it was only with this transformation that the mission communities were transformed into municipalities (Arcilla, 1971:48–50).

With this open-door policy, British- and American-based banks and insurance companies began to be established in Manila. These institutions in turn founded more plantations that shipped produce through the newly opened (1869) Suez Canal to a growing European market (Constantino, 1975:114–115; Corpuz, 1989:458–460; Diaz-Trechuelo Spinola, 1978:1345–1349; Legarda, 1967:1–12; Tubangui et al., 1982:85–89). Descriptions of this nineteenth-century trade underscore Spain's shift from mercantilism into commercial capitalism. For example, in the Philippines as early as 1838, royal treasury officer Rafael Diaz Arenas (1979 [1838]:36) nonchalantly wrote of the presence of foreign traders: "All European merchandise carried in non-Spanish ships were to pay a duty of 14%." He went on to discuss their plantation produce and other raw-material exports and the wide variety of foreign imports brought into the Philippines by these individuals (Diaz Arenas (1979 [1838]:45–73)). What I find most interesting in his account is his specification of items imported by "Anglo-Americans," which included crystal ware and ceramics. By the 1880s, Chinese-owned

department stores in Manila dealt in "fine crystal and furniture" from Europe (Legarda, 1967:13). Britain and the United States were the numbers one and two non-Asian importers in the Philippines in the nineteenth century, while the Spanish were a poor third (Cushner, 1971:197; Legarda, 1967:11).

By the 1890s, Spanish political control was rapidly fading in the face of an active independence movement. In 1898, when the Spanish-American War was ignited, the 377-year Spanish presence in the Philippines was ended following a 3-hour-long naval engagement and an hour-long mock land battle. Rather than granting Philippine independence, the United States held the archipelago until July 4, 1946. It is important to note that much of the Spanish colonial architectural history of the Philippines was erased during the fierce fighting that accompanied the American recapture of the islands from Imperial Japan in 1944–1945 (Diaz-Trechuelo Spinola, 1978; Gatbonton, 1985).

Guam and the Marianas

The Micronesian islands of Guam and the Marianas first became known to Europeans when Ferdinand Magellan landed there on March 6, 1521, and claimed the archipelago for Spain. At that time he named the islands the *ladrones* (Spanish for thieves) because of the loss of some materials to the indigenous peoples. In 1565, the Marianas, like the Philippines, were made part of the vast Viceroyalty of New Spain that stretched from Florida to Manila and from Central America to Nootka Sound. Yet for nearly 150 years, until 1668, the islands were rarely visited other than by the Manila-bound sailors of the Manila Galleon and a handful of English and Dutch privateers who hoped to capture the riches of the area. Other than these occasional visitors who stopped to reprovision and refresh their water supplies, only a handful of westerners spent an extended period on the islands (Langdon, 1992:7–16). They included Gonzalo de Vigo on Guam (1521–1526), the shipwrecked (1568) survivors of the *San Pablo*, and a Franciscan friar and two soldiers in 1596. In 1601, Franciscan Father Juan Pobre de Zamora, and later two other Franciscans, established a mission on Rota that lasted for 2 years (Driver, 1993a:1–3; Reed, 1952:39–42).

When first encountered, the indigenous population of the region, known as the Chamorro, was estimated to number in the tens of thousands (Cunningham, 1992:53; Thompson, 1947:32–33). At that time, the Chamorro were a kin-based, socially ranked society (Thompson, 1947:49). On Guam alone, the population has been estimated at between 30,000 and 45,000 in some 180 settlements (Cunningham, 1992:53; Reed, 1952:23; Thompson, 1947:32–37). The Chamorro antecedent of Agaña, the modern capital, contained over 200 structures as late as 1668. Linguistically, the Chamorro spoke a language that originated from the root Malayo-Polynesian stock, which includes such languages as Bahasa Indonesian and Tagalog (Safford, 1903).

Chamorro subsistence was based on a combination of gardening, gathering, fishing, and some hunting. They cultivated yams, taro, breadfruit, coconuts, bananas, and rice, and gathered a number of shellfish and crustaceans, wild fruits, nuts, and bulbs. Fishing using hooks, gorges, and nets was both a shore and deepwater activity, with the latter being accomplished from large, 24–40-foot-long *proas*—outrigger canoes with a lateen sail woven from palm fronds (McGrath, 1993:36–49). For the hunting of birds and warfare, the Chamorro were armed with spears and slings (Reed, 1952:25–26).

Precontact material culture included ceramic jars and basket containers, pottery cooking vessels, and a variety of shell, bone, and stone tools. Gable-roofed, frame-and-thatch structures were elevated on posts of wood or stone. The latter megaliths, known as *latte,* mark the structures of the elite (Cunningham, 1992:47–53; Reed, 1952:24, 26–29).

The archipelago leaves the twilight of protohistory in the late 1660s with the establishment of the first mission and fortification in Agaña (Degadillo et al., 1979:7–8) (Fig. 3). The Jesuit mission was headed by Father Diego Luis de San Vitores. It was he who was responsible for renaming the archipelago for Queen Mariana of Austria, wife of Felipe IV (m. 1649–1665) and regent for her son (1665–1676) Carlos II, who actively supported the missionary activities of the Society of Jesus (Driver, 1993b:5–12).

With the establishment of this mission and military presence, the formerly friendly Chamorro began to resist conversion and colonization. Nonetheless, in the 5 years following the landing of San

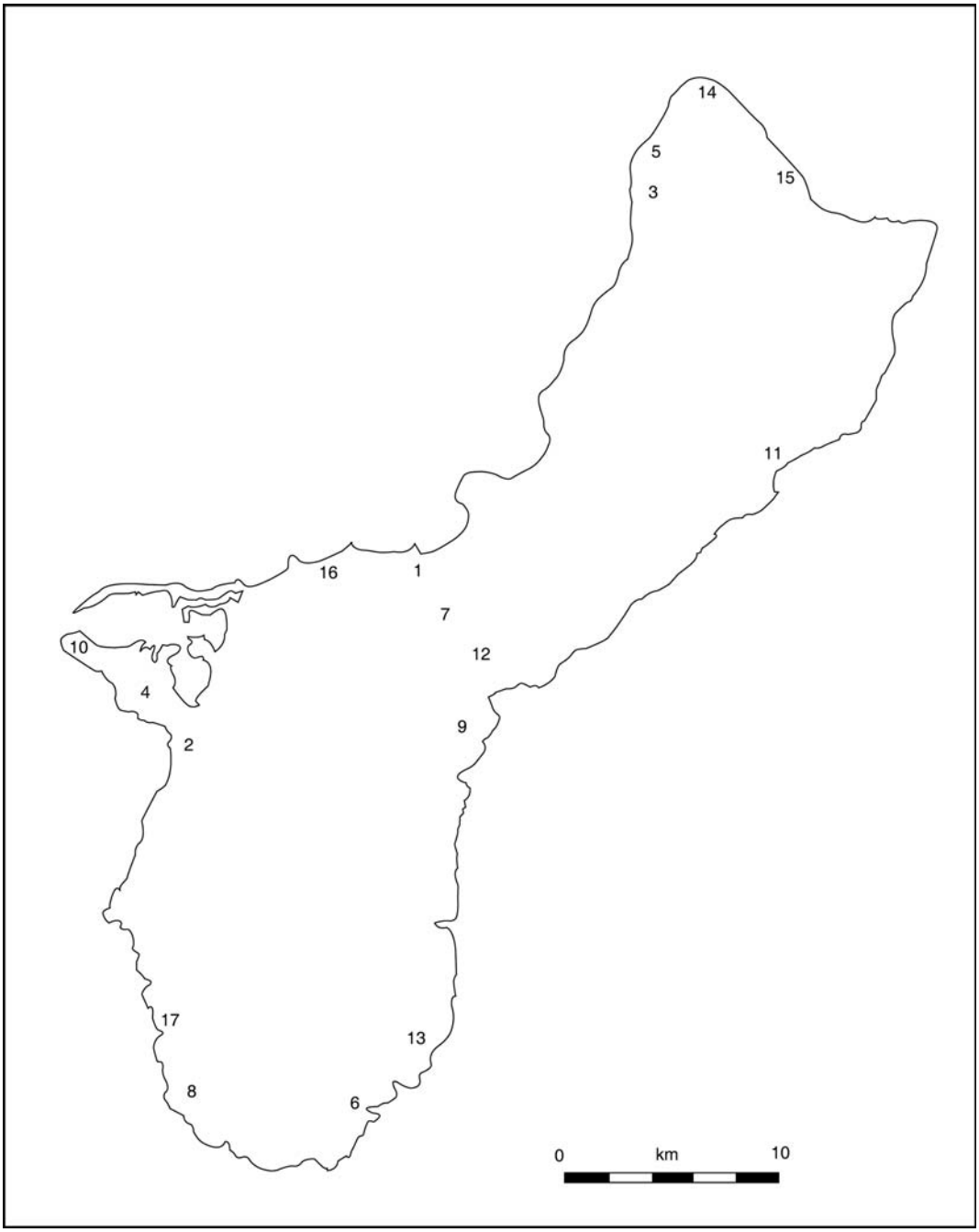

Fig. 3 Map of Guam with Spanish Mission sites (missions were under the Jesuits from 1672 to 1769 and were then replaced by Augustinian Recollects): (1) Agaña, 1668 – present; (2) Agat, 1680–1865; (3) Aryraan, 1675–1693; (4) Fuuna, 1673–1715; (5) Inapsan, 1680–1690; (6) Inarajan, 1680–1865; (7) Mapupun, 1681–1690; (8) Merizo, 1672–1865; (9) Nisihan, 1672–1690; (10) Orote, 1674–1690; (11) Pagat, 1672–1680; (12) Pago, 1680–1855; (13) Pigpug, 1672–1690; (14) Ritidian, 1675–1680; (15) Tarague, 1674–1690; (16) Tepungan, 1674–1680; (17) Umatac, 1680–1849

Vitores, six missions and a single fort were erected on Guam (see Fig. 3). The balance of the seventeenth century was marked by active resistance to the Spanish, including warfare and revolts. Still, between 1675 and 1683, in the wake of the Chamorro rebellion, 11 new missions, a stone fort,

Santa Maria de Guadalupe, and a gun battery brought the Spanish to every corner of Guam (Degadillo et al., 1979:7–10; Driver and Brunal-Perry, 1994:11–12; Haynes and Wuerch, 1990) (see Fig. 3). These military actions, combined with a number of devastating typhoons and outbreaks of smallpox and other introduced diseases, decimated the population such that by the beginning of the eighteenth century there were fewer than 5,000 Chamorro left on Guam (Reed, 1952:43–52).

Over the next two centuries, much of traditional Chamorro language and culture was transformed through contact with Spanish-speaking civilians, priests, and soldiers from Spain, the New World, and the Philippines (Van Peenen, 1993:21–24). Additionally, large numbers of Filipinos and Caroline Islanders relocated to Guam and the Marianas (Barratt, 1989; Fritz, 1989:16; Reed, 1952:60). The transformation of the island from one which was to be pacified to one that was part of the Spanish colonial system is evidenced in the decline in the number of missions to only five after 1715 (Haynes and Wuerch, 1990). Similarly, the 12 fortifications and batteries that were erected in the eighteenth and nineteenth centuries were built to protect the island from invaders, not from internal insurrections (Degadillo et al., 1979:3; Driver and Brunal-Perry, 1994:12–17).

During these two centuries, Guam and the Marianas were drawn politically, ideologically, and economically into the larger Spanish colonial world. Existing Chamorro communities, and those which were created from the mission *reducciones,* were incorporated for administrative and tax-collecting purposes as pueblos and villas. As in New Spain and the Philippines, each municipality had a number of appointed and elected officials to carry out the wishes of the governor acting in the name of the Viceroy of New Spain, who lived in Mexico City, and the King of Spain. By the beginning of the nineteenth century, most civilians were wearing Filipino-style, mestizo clothing and were active in the Catholic Church. At the same time, those who were part of municipal government were speaking Spanish on a regular basis (Thompson, 1947:48, 59, 62).

Economically, the islands stagnated, primarily raising enough crops and livestock to maintain themselves and to refresh the Manila-bound crews of the Manila Galleon after their long journey from Acapulco (Safford, 1902:727; Schurz, 1939). Only after the loss of the New World did Spanish interest in their Pacific Ocean colonies increase. In this era of waning Spanish colonialism, the island of Tinian in the Marianas was pressed into service for cattle grazing (Carrano and Sanchez, 1964), a parish was reopened on the island of Rota in 1855, and an Augustinian mission was established on Saipan (Reed, 1952:60). It was in the last quarter of the nineteenth century, when steam-powered vessels and the opening of the Suez Canal first shrank the globe, that the Marianas produced its first export cash crop—copra from the coconut palm (Fritz, 1989:58–59). At the same time, Spain exercised its centuries-old claim to the Caroline Islands in 1885 when it established the pueblo of Kolonia on Pohn Pei (Ponape until 1989) to forestall Imperial German claims to the region (Carrano and Sanchez, 1964; Carrell, 1991:154–157).

The remoteness of the Marianas cannot be discounted when considering its history. Indeed, it must have been a lonely existence in the Marianas Islands when they received no *situado* and no news from Spain for a 6-year period between 1810 and 1816 (del Valle, 1991:10). The reality is that these islands lie some 2,400 km (1,500 miles) from Manila, 8,200 km (5,100 miles) from San Francisco, and 11,263 km (7,000 miles) from Acapulco. In the age of sail, a round-trip navigation from Acapulco to Manila, some 27,353 km (17,000 miles), took 14 months (Moses, 1929:75; Schurz, 1939; Smalley, 1995). With these figures, even the casual observer can begin to see how geography would affect how Spain's Pacific possessions figured in its empire. The harsh reality was that these were remote, insignificant dots on a distant, immense sea. While plantation produce might be grown in the Pacific, there was little reason to compete with New and Old World producers who were closer to European markets and had regular commercial contact with the Spanish motherland (Skowronek, 1997:33–50). Underscoring their remoteness is the fact that on June 20, 1898, Guam was taken by the United States, surprising the Spaniards, who had no knowledge that war had started 2 months earlier and that Manila had already been captured by Dewey on the first of May.

For the next 52 years, with the exception of a 2.5-year hiatus when the island was occupied by

Imperial Japan, Guam was administered by the U.S. Navy. The recapture of the island in 1944, following a devastating naval bombardment and heavy air strikes, almost entirely destroyed Agaña and the other civilian, military, and religious enclaves first established by the Spanish. A trust territory of the United States with a civilian government since 1950, the island is still largely controlled as a military reservation.

An Archaeological Overview of the Spanish Colonial Fringes

The Northwest Frontier

Of the three colonial areas of New Spain discussed in this chapter, it is the North American section that has received the majority of archaeological attention over the past century. Unlike the northeastern borderlands, where interest in the Spanish colonial period was fairly limited until the 1970s, the Hispanic legacy in the U.S. Southwest was never lost. Today, such organizations as the Southwestern Mission Research Center in Tucson, Arizona, and the California Mission Studies Association in Santa Clara, California, are dedicated solely to the study of the Spanish colonial and Mexican Republic era. Their regular publication of newsletters and annual conferences bring scholars together. A number of regional and international research journals have also published widely on this era. They include *New Mexico Historical Quarterly, Masterkey, Pacific Coast Archaeological Society Quarterly*, *Boletín: Journal of the California Mission Studies Association,* and *Historical Archaeology* (e.g., Farnsworth and Williams, 1992). In addition to these, individuals interested in this region today have a number of other excellent and easily obtained sources to consult. Most were published over the past decade in conjunction with the Columbian Quincentennial and the sesquicentennial of the Mexican-American War and should serve as a baseline for all researchers.

Kicking off the Quincentennial was the first of three Columbian Consequences volumes edited by David Hurst Thomas (1989), entitled *Archaeological and Historical Perspectives on the Spanish Borderlands West*. Derived from a session at the Society for American Archaeology annual meetings, it brought together a broad spectrum of the individuals who were then actively involved in northwest borderlands research from Texas to California. Shortly thereafter, Thomas (1991) served as the series editor for a monumental 27-volume compendium of over 400 classic, hard-to-find articles and other source materials documenting interactions between indigenous peoples and the Spanish across New Spain's northern borderlands. These *Spanish Borderlands Sourcebooks* include titles devoted to ethnology, documents, ethnohistory, and archaeology. No fewer than 12 of the volumes focus on the northern borderlands. It is worth noting that those dealing with archaeology are not overviews, rather they are compendiums of older, often-hard-to-find articles.

There is one bibliography for research in this broad area, *The Archaeology of Spanish and Mexican Colonialism in the American Southwest,* compiled by James E. Ayres and published by the Society for Historical Archaeology as the third number in the Guides to the Archaeological Literature of the Immigrant Experience in America series in 1995. Divided into three sections, for Texas, New Mexico, and California, this is the most comprehensive bibliography on this region, although it unfortunately lacks a section on Arizona. Each state-focused section has a brief historical overview and a review of significant projects focused on specific site types, such as protohistoric and contact-period Native American *rancherías*, or Spanish American presidios, pueblos, missions, ranchos, and material-culture studies. For the most part, this is a descriptive, critical overview of past projects. In the section titled "The Archaeology of Spanish and Mexican Alta California," Barker et al. (1995:21) rightfully lament that the vast majority of work in California (and that could be extrapolated to the rest of the borderlands), is atheoretical in approach and conducted for reconstruction and restoration purposes. Often, reports are nonexistent or difficult to come by as part of the vast and largely unknown, "gray literature." Nonetheless, throughout the region, other descriptive reports and publications on missions, pueblos, presidios, and ranchos (e.g., Hylkema, 1995; Lightfoot, 2005; Shoup, 1995; Silliman, 2004; Skowronek, 1999; Skowronek and Thompson, 2006; Skowronek and Wizorek, 1997; Walter, 2007; Williams, 1992)

continue to add to our knowledge of the various manifestations of Hispanic lifeways on the northwestern corner of New Spain.

Evidence from Shipwrecks

A crucial part of understanding the importance of a colonial area to an imperial power is the area's proximity to a "main street" of communication from the colonies to the homeland. As a result, a colonial area that might otherwise be neglected because it possessed no "valued" exportable commodities still might attract imperial, colonial interest simply to deny it to competing powers—who might use it as a staging point for attacks on the "main street." Certainly, La Florida was one such "protective" colonial area (Skowronek, 1989), as would be Texas and California later. In the case of the former, over 125 years before La Salle's abortive colonial venture on the Texas coast led to the loss of *La Belle* (Bruseth and Turner, 2005), a nautical "main street" hugging the shores of the Gulf of Mexico was established between Vera Cruz and Havana. The most famous loss in this route was the flota of 1554, off Padre Island (Fig. 4). Perhaps the best archaeologically excavated and documented (e.g., Arnold and Weddle, 1978; Olds, 1976; Skowronek, 1987) Spanish wrecks in the continental United States, the disaster has been commemorated in a wonderful permanent

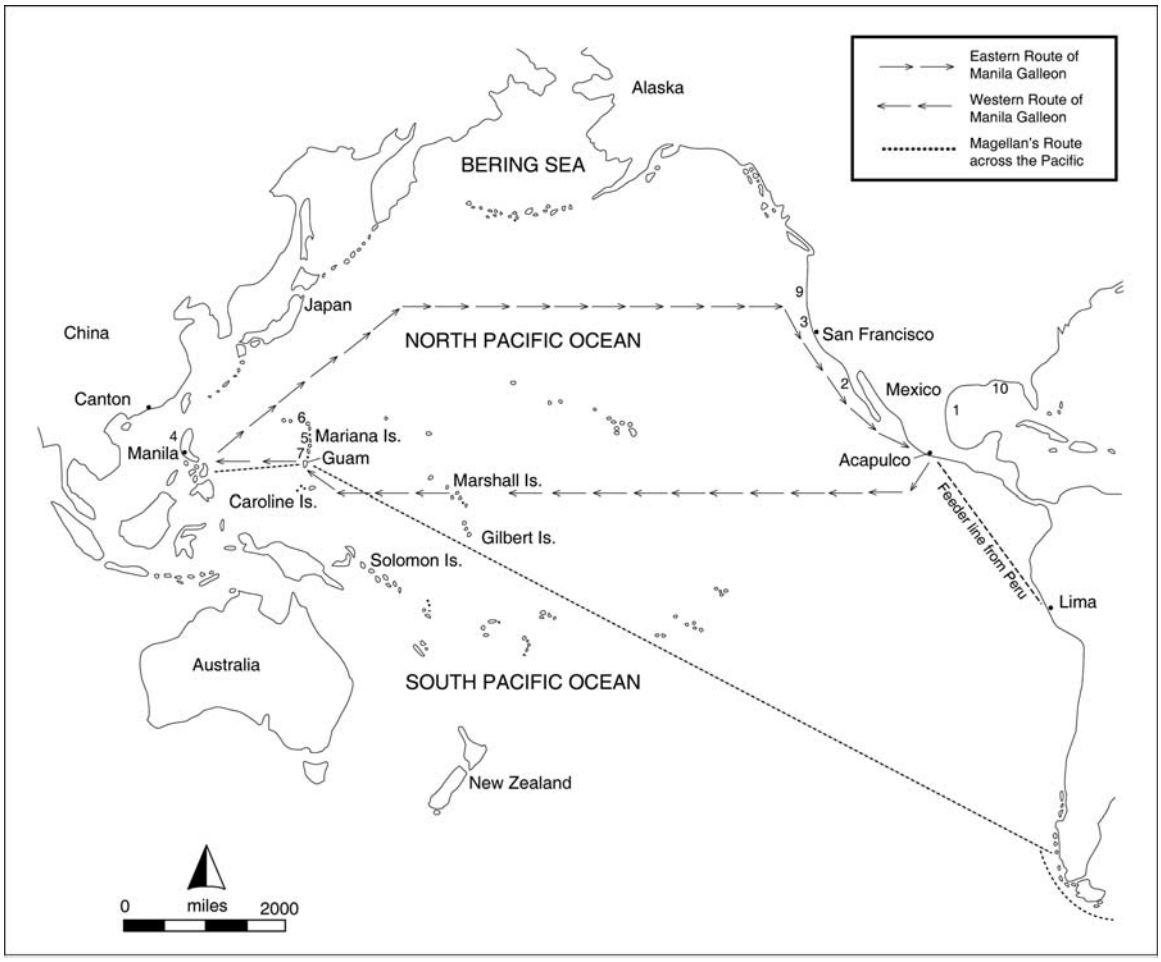

Fig. 4 Spanish shipwrecks mentioned in the text: (1) 1554 flota; (2) *San Felipe,* 1576; (3) *San Agustín,* 1595; (4) *San Diego,* 1600; (5) *Santa Margarita,* 1601; (6) *Nuestra Señora de la Concepción,* 1638; (7) *Nuestra Señora del Pilar de Saragoza y Santiago,* 1690; (8) *Santo Cristo de Burgos,* late seventeenth century; (9) *San Francisco Xavier,* 1705; (10) *El Nuevo Constante,* 1766

display at the Corpus Christi City Museum. The study of these vessels yielded heretofore-unknown details regarding sixteenth-century nautical architecture and technology, as well as on the makeup of cargoes in the first years of New World trade.

Two centuries later, another vessel, *El Nuevo Constante* (see Fig. 4) was lost in 1766 on the Louisiana coast. This ship, like the 1554 vessels, had sailed from Vera Cruz as part of the New Spain flota when it was lost in a hurricane. As with the earlier wrecks, it was laden with silver and gold coins and bullion, as well as such exotica as dyestuffs cochineal, anatto, and indigo. Exotic foodstuffs included vanilla and chocolate. There was one important difference in this vessel's cargo: a significant portion of it was made up of such bulk items as cheap Mexican-made ceramics and goat and cow hides (Pearson, 1981; Pearson and Hoffman, 1995). The hides are a significant first signal of the transformation of Latin America into a Third World producer of "raw" materials. Previous to the 1763 Treaty of Paris that ended the Seven Years War, hides had not figured as a "valued" export item on Spanish vessels (Skowronek, 1984, 1992). In the wake of this peace treaty, Great Britain won trading concessions in the Spanish New World. This was a trade that would come to be an exchange of English finished goods, such as cloth and ceramics, for the bulk commodities of the New World.

On the Pacific coast of northwestern New Spain, there are a number of known wreck sites representing the era when this vast ocean was Spain's pond. It is worth noting, however, that unlike the work in Texas, underwater archaeology in this region is far less developed due to sea conditions and other factors. Just a quarter of a century after Juan Cabrillo coasted California's foggy, rock-strewn edge in 1540, there began a 250-year-long odyssey known as the Manila Galleon trade. From 1565 to 1815, there was a Spanish trade monopoly between the ports of Acapulco in Mexico and Manila in the Philippines.

Annually, two ships made the 14-month-long round-trip carrying Asian exotica. The ships were constructed in the Philippines. European in style, they were built by Asian craftsmen, and largely crewed by Filipinos. The route followed by the galleons carried them north of Hawaii to the Mendocino coastline of California. There, they turned south for Acapulco.

It was on the first voyage in 1565 that Father Andres Urdaneta passed California's fog-shrouded coast without making landfall. Not all Manila Galleons were so lucky. One of the first to be lost was the *San Felipe*. Built in Acapulco in 1573, it successfully crossed the Pacific Ocean during the summer of 1575. A year later, the ship sailed for Mexico with a cargo of porcelain and beeswax. It never arrived. In the late 1990s, Edward Von der Porten and a team of Mexican and U.S. researchers identified an archaeological site in Baja California whose associated artifacts suggest it is the remains of the *San Felipe* (Ashley et al., 2003; Von der Porten, 2005) (see Fig. 4).

In 1585, Archbishop Pedro Moya de Contreras ordered the returning vessels of the Manila Galleon to reconnoiter the California coast. After numerous delays in Asia, including the death of Capt. Francisco Gali, the expedition's leader, and the confiscation of the Spaniard's ships by the Portuguese, a *fragata* left Macao on July 12, 1587, for California. Under the command of Pedro de Unamuno, it had a Filipino crew from Luzon and a few soldiers and priests of Spanish descent. On October 18–20, they made a landing on Morro Bay. Following a clash with the resident Chumash that left one Filipino and one Spaniard dead, they sailed for Acapulco (Wagner, 1929:140–151).

Perhaps, for Californians, the most famous Manila Galleon of the hundreds of vessels that made this journey was one that did not complete it—the *San Agustín* (see Fig. 4). Like Unamuno's expedition, this galleon had been instructed to explore the coastline of California while sailing from Manila to Acapulco (Wagner, 1929: 156–163). Thought to have been lost in what is today called Point Reyes National Seashore in Drake's Bay, it foundered late in 1595. While most of the crew and its captain, Sebastian Rodriguez Cermaño, survived and completed their trip to Acapulco in small boats, the valuable cargo of Asian-made porcelains was lost. Over the centuries, fragments of blue-on-white porcelain have washed up onto the beach in the National Seashore. They are found in archaeological sites up and down the Mendocino coast that are associated with Miwok Indians. The wreck of the *San Agustín* has never

been found. It remains of intense interest to treasure hunters such as Robert Marx (Delgado and Haller, 1989:179–180; Delgado, 1997:356–358), as well as researchers from the USDI National Park Service and other institutions in the San Francisco Bay Area (e.g., Von der Porten, 1972; Shangraw and Von der Porten, 1981). Currently, Edward Von der Porten is spearheading a renewed effort to identify the location of the wreck and the associated survivors' camp.

In addition to the *San Agustín,* at least two other potential sites are mentioned in the literature. According to Rogers (1999:244), the *Santo Cristo de Burgos* was lost off the Kona coast in Hawaii in the late seventeenth century (see Fig. 4). No archaeological research is known to have been conducted. The other is the *San Francisco Xavier,* lost in 1705 (see Fig. 4). The ship is known to have been carrying a load of beeswax. For more than a century researchers have reported the presence of large blocks of beeswax on the Oregon coast south of Astoria (Clark, 1905:174; James Delgado, personal communication, 1999, 2002:224; Wayne Jensen, personal communication, 1999; Nehalem Valley Historical Society Treasure Committee, 1991; Smith, 1900:73–75; Stafford, 1925:24–41). The Tillamook County Pioneer Museum contains large pieces of beeswax and other artifacts collected from Manzanita Beach. As a result of these discoveries it has come to be known as the Beeswax Wreck. In 2006, a research design for the Beeswax Wreck Project was completed (Williams, 2006), and a study of the site was initiated in 2007.

Terrestrial Archaeology and Ethnohistory

Perhaps the area of research that has exploded the most in the past decade is an interdisciplinary approach using the skills of both the anthropologist and the historian. This no doubt is due in part to the high cost of archaeological excavations, but also may represent the first fruits of the ordering of archives and the compilation of documents begun during the Quincentennial. The result has been an explosion in the number of books and articles by anthropologists and historians focused on the Spanish colonized areas of the United States. Some of the publications have examined demographic change (e.g., Jackson and Castillo, 1995; Kealhofer, 1996); most have provided new information on history (Lambert et al., 1998; Skowronek and Thompson, 2006) and activities (Schuetz-Miller, 1994) of the northern borderlands that may be testable in the archaeological record.

For example, Richard and Shirley Flint (1997, 2003) have compiled the most comprehensive investigations of the sixteenth-century route of Coronado. These important works provides information on the hard-to-define protohistoric period. Beyond simply placing a line on a map, the Flints' ongoing work allows us to place and name protohistoric peoples in a specific territory before the era of depopulation due to disease or the movement of peoples.

A number of new publications focus on the effects of the mission experience on indigenous peoples in the San Francisco Bay area. Rebecca Allen (1998) has studied how aboriginal culture responded to the mission experience. At Mission Santa Cruz, she found that the neophytes retained much of their traditional culture and only selectively added European material culture. They maintained a separate system of value from that of colonial newcomers. It was a value system based on prehistoric patterns, but incorporating introduced material culture. Allen found that the Cruzeños were marginalized by the military and civilian populace because they did not control the goods produced by their labor as part of the mission system. As a result, ethnic differences between Yokuts and Ohlone faded and were replaced by a generalized neophyte "Indian" identity based on an indigenous value system.

Skowronek (1998a) considered how the missions of the same region had been alternately romanticized and reviled for a century. In order to reconcile aspects of these two opposing views, an interdisciplinary approach was the backdrop for considering culture change and continuity in the Ohlone/Costanoan culture area. Archaeological and documentary records demonstrated that the Ohlone peoples of the San Francisco Bay area maintained tangible aspects of their precontact culture despite more than 60 years of missionary efforts to divorce the neophytes from their traditions.

One of the most powerful ethnohistories on the region was published in 1995. Written by Randall

Milliken, it discusses tribal disintegration resulting from congregation into Bay Area missions. And yet, he notes that Prehispanic marriage patterns continued after congregation. Milliken's (1995) observations on these aspects of family and kinship and social organization may not only be useful for identifying residual tribal patterns in the mission setting, but may, when combined with growing DNA information, lend insights into tribal territories in the precontact era.

Researchers from the University of California have come to the forefront in the application of anthropological theory in the study of colonial encounters in California. Kent Lightfoot (2005) has considered the interplay between Spain and Russia as played out between commercial interests, Franciscan missionaries, and indigenous peoples. Others have focused their attention on the role of native peoples in the rancho economy (Silliman, 2004) and the interplay of culture contact, gender, and ethnicity in the context of the Presidio of San Francisco (Voss, 2002, 2008).

On the eastern edge of the northern borderlands, in what today is Louisiana, Dr. George Avery of Northwestern State University of Louisiana has conducted outstanding research since 1995 at the site of Nuestra Señora del Pilar de los Adaes (Avery, 1995, 1996, 1997, 1998). Located among the Caddo in a region visited by de Soto, this eighteenth-century presidio is perhaps the best-reported project conducted in the past decade. Although these reports might be considered part of the previously mentioned "gray literature," they not only include a detailed technical report of the field procedures, but also illustrations and descriptions of the recovered artifacts, historical-period maps, and translations of pertinent documents. Avery has not simply raised the bar on standards for reporting, but will, when completed in the form of a monograph, have compiled one of the most detailed compendiums of archaeologically recovered eighteenth-century Spanish material culture in the northwestern borderlands.

Another researcher in the forefront of the archaeological study of the Spanish borderlands is Tamra Walter. Her work on one of the sites of Mission Espíritu Santo southeast of San Antonio has used information collected during excavation of the site to obtain a better sense of the daily lives of the people who called the mission home. She and Avery represent a new generation of scholars studying the archaeology of Spanish Texas.

Material Culture

Beyond Avery's detailed reports, there has never been assembled a "catalog" of Spanish colonial material culture on the northwest borderlands that would complement Deagan's (1987) contribution for Florida and the Caribbean. Nonetheless, the ceramic industries of the region have been a topic of ongoing study. Anita Cohen-Williams and Jack Williams (2004; also Cohen-Williams, 1992) have led the way in the study of majolicas in Arizona and California, while Linda Longoria's (2007) work with porcelains recovered from Spanish colonial sites in Texas has pioneered a new way of interpreting the meaning of this artifact type in the study of the frontier. In areas such as New Mexico and Arizona, where there was a prehistoric potting tradition, researchers (e.g., Carrillo, 1997; Frank, 1991) have been able to convincingly demonstrate local craft specialization for the nascent Hispanic community, as well as for export to Chihuahua.

Ceramics were largely unknown outside of southern California before the arrival of the Spanish in 1769. Given that the vast majority of the indigenous inhabitants were semisedentary fishers, gatherers, and hunters, this is not surprising. Throughout what was Alta California, archaeologists have found fragments of hand-modeled and wheel-thrown, unglazed, low-fired earthenwares in Spanish- and Mexican-period missions, presidios, pueblos, and ranchos. Descriptive analyses of the vessels' forms suggest a wide range of functions—including storage, preparation, presentation, and consumption. The acknowledged leader in the study of these earthenwares and their associated fabrication technology is Julia Costello. Over the past two decades she has studied kilns and vessels from Santa Barbara to San Francisco (e.g., Costello, 1985, 1997; Hoover and Costello, 1985).

The extraordinary similarities between earthenwares found hundreds of miles apart have been explained by some as the result of intracolonial trade. Others feel that a more parsimonious answer would be that most of these ceramics were produced and used locally. To answer this question and to

better understand colonial economics, other researchers (e.g., Skowronek et al., 2001, 2003, 2006, 2009) from Santa Clara University and the Smithsonian have begun studying the Spanish colonial and Mexican Republic ceramic industry in California.

To do this, neutron activation analysis (NAA) is being used to compositionally characterize the paste of these earthenwares from the length of California. The study has demonstrated that plain and glazed utilitarian pottery was locally made to fill local needs. While the vast majority of more specialized lead-glazed pottery was imported from at least one major production center in Mexico, the evidence for the production of glazed ceramics in California is now found at five different locales: Santa Clara, Santa Barbara, San Francisco, San Juan Capistrano, and Carmel. The discovery of both plain and lead-glazed ceramics with nonlocal compositional signatures may well provide us with evidence for localized exchange (Skowronek et al., 2003). Similar work has been conducted in Texas on collections from a number of mission sites (Carlson, 1994; Carlson and James, 1995; Neff and Glascock, 2002). Another location where ceramics were studied with this technique is a forgotten corner of the empire on what is now the coast of British Columbia. Spain established an outpost at Yuquot (1789–1795), better known as Nootka. Excavated in the 1960s by Parks Canada, the site yielded fragments of majolica tablewares, olive jars, and other lead-glazed earthenwares (Lueger, 1981:109–118). NAA of the latter category was conducted at Brookhaven National Laboratory in Upton, New York. It was postulated that the ceramics originated near Jalisco in western Mexico, but the data did not bear this out (Weigand et al., 1981:171–178). What is significant is that their findings were published and can be used by other researchers a quarter of a century later.

One of the most interesting artifact studies to come out of Manila Galleon cargo studies that can shed light on the birth of a single global economy centered on Europe is the work of Clarence Shagraw and Edward Von der Porten on Chinese porcelains. They have found that those porcelains made for the Manila Galleon or European trade bore design motifs specifically rendered to suit European market preferences (Shangraw and Von der Porten, 1997). Their work, based on materials from known shipwrecks, can tightly date the styles to 25-year intervals.

The Spanish Philippines

The rich past of the Philippines has been studied by archaeologists for over a century. As with most of the global archaeological endeavors of the past century, the majority of the work has focused on the precolonial era. From an initial desire to create museum displays, there has developed from this work an excellent understanding of Philippine culture history, material culture typologies, and culture process from the Pleistocene through the sixteenth century (e.g., Beyer, 1949; Dizon, 1994a; Jocano, 1975).

Nearly 400 years of Spanish colonialism remained largely unstudied, except for incidental discoveries and a single project in Zamboanga (e.g., Beyer, 1946; Guthe, 1927, 1929; Spoehr, 1973), until 1979. This is understandable when one considers that the Spanish legacy was still very much a part of the life of the Philippines into the seventh decade of the twentieth century. Not only was Spanish colonialism part of the living memories of many individuals, but as late as the 1980s mandatory Spanish-language training and the prominent place of Roman Catholicism kept the era alive. Nonetheless, many of the tangible architectural remnants of the Spanish colonial period had been erased from Metropolitan Manila and other locales due to neglect, urban renewal, and the ravages of World War II (Gatbonton, 1985; Zialcita and Tinio, 1980) (Figs. 5–7). This nostalgia for the past was given focus in 1979 when a Filipino Presidential Decree (P.D. 1616) created the Intramuros Administration to restore the walls and rehabilitate the inner city of Manila.

The Anthropology Division of the Philippine National Museum provided archaeological expertise for work in the National Capital Region. From 1979 through 1988, 16 projects were conducted in Intramuros on parts of the fortifications (Fig. 8), the site of the *ayuntamiento*, the church of San Ignacío, and Plaza San Luís (Archaeological

Fig. 5 Ruins of Fort Santiago, Manila (photograph by the author, 1995)

Specimen Inventory Record, Archaeology Division, Philippine National Museum). Much of this early work was highly descriptive and focused on comparisons between the archaeological and documentary record as regards the architecture of the sites investigated (e.g., Accion, 1979, 1982; Accion et al., 1982; Bautista, 1985; Dizon, 1980, 1994b; Gatbonton, 1985; Reyes, 1981).

In 1988, the Archaeology Division of the Philippine National Museum was established with Wilfredo Ronquillo as its chief and Eusebio Dizon as assistant curator and head of the underwater archaeology section. During the first 6 years of its existence, 22 projects were undertaken by this agency on historical-period terrestrial and shipwreck sites from the Spanish period (Dizon, 1994a:200–203, 208–210; Ronquillo, 1990:21–24). Terrestrial investigations have continued in Intramuros and other sites in Metro Manila (e.g., Bautista, 1993, 1994; Bautista and de la Torre, 1992a, 1992b, 1994; de la Torre, 1993a; Orogo, 1993a,1993b; Orogo and Alegre, 1994).

In this same period, the first archaeological research on sites dating from the Spanish colonial period outside of Manila was undertaken by the Archaeology Division of the Philippine National Museum. This work was conducted in the south of the country on Camiguin Island, off the north shore of Mindanao (Bautista, 1993), at Tukuran Zamboanga del Sur on the west on Mindanao (Bautista and Penalosa, 1994; Bayaca et al., 1994), and on Mindanao proper (Bautista et al., 1994; de la Torre, 1994). Other than these projects, the only work on topics relating to the Spanish colonial period has been funded through the National Endowment for the Humanities and the Thomas Terry Research Fund at Santa Clara University (Skowronek, 1997, 1998b, 2002). This work has focused on the material manifestations of the Spanish Philippines in the larger context of the Spanish colonial world.

Evidence from Shipwrecks

Underwater research in the Philippines has been very prominent since the early 1980s (Dizon, 1994a:208–210; Ronquillo, 1990:21–24). During

Fig. 6 Gate to Fort Santiago, Manila, in 1945 (Courtesy U.S. Army Signal Corps)

the last two decades, a number of vessels of Spanish colonial origin and others have been studied, usually in joint ventures with for-profit salvors. Although these collaborations have at times been problematic, under the leadership of Dr. Eusebio Dizon the Underwater Archaeology Section at the Philippine National Museum has gained public prominence with the opening of a "Maritime Gallery" at the National Museum in Manila that showcases the history of maritime technology and culture in the Philippines. Three Spanish colonial wreck sites have been studied. *Nuestra Señora de la Vida*, lost

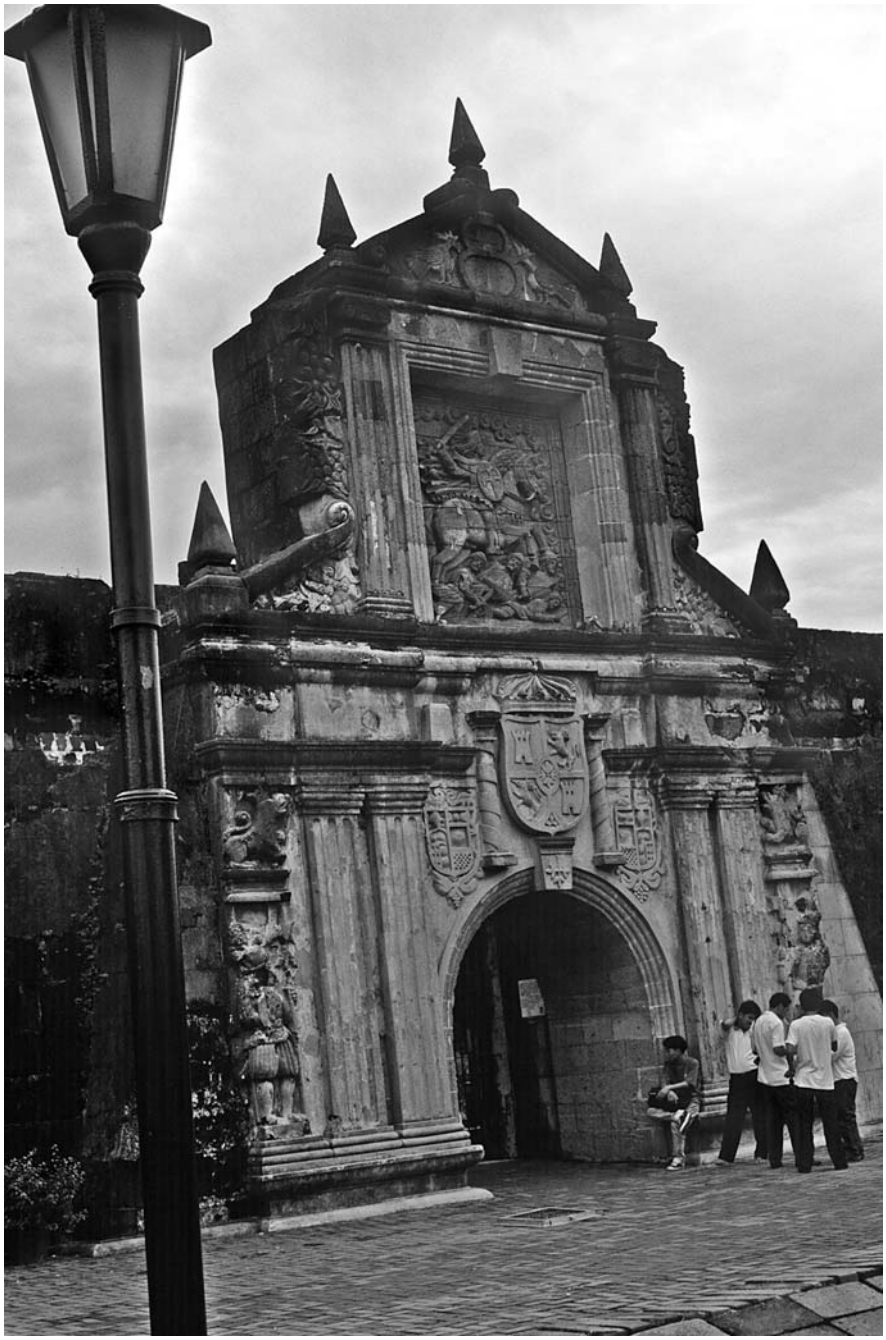

Fig. 7 Gate to Fort Santiago, Manila (photograph by the author, 1995)

off of Isla Verde in 1620 (Abinion, 1985; World Wide First, 1985); the *San José*, lost on July 3, 1694, off of Lubang Island (World Wide First, 1986); and the *San Diego*. The first two have yielded some architectural remains, ordnance, and some fragments of Chinese export porcelain.

The most famous and best-documented vessel yet examined is the *San Diego* (see Fig. 4). It foundered in 164 feet (50 m) of water off Batangas and just outside Manila Bay following an engagement with a Dutch vessel on December 14, 1600. Beginning in 1991 and continuing through 1993, the *San Diego*

Fig. 8 Restored fortifications of Intramuros with modern Manila in the background (photograph by the author, 1995)

was discovered, excavated, and reburied by World Wide First and the Philippine National Museum. Its great depth protected this Manila Galleon from casual sport divers and treasure salvors, as well as from mechanical dispersion from ocean swells. As a result, the remains of the ship—its stores, accoutrements, and cargo—were laid out as it sank in a 3-m-tall mound of debris. It has been the subject of profusely illustrated poplar books (Desroches et al., 1996), excellent technical reports (Valdes, 1993), and detailed artifact studies (Alba, 1993; de la Torre, 1993b) by researchers from the National Museum and others.

Ethnohistory and Ethnohistoric Documentation

Ethnoarchaeology is based on a combination of oral histories, documentary history, ethnography, and archaeological investigation. The findings of these projects could be used as explanatory models for human behavior whether in the Philippines or California. In the Philippines, there are a number of excellent recent projects that have provided terrific insights into cultural continuity and change.

Professor Fernando Zialcita of Ateneo de Manila University and his colleague Martin Tinio (1980) conducted a detailed examination of Filipino housing from the beginning of the nineteenth century through the 1930s. They trace how the indigenous *bahay kubo* was transformed—first with the Antillian styles of the Spanish, and later in the nineteenth century with the Victorian styles of foreign expatriots. One of the strongest messages that is brought out in this study is that while the facades of the structures and their material accoutrements may change, the interior division of space and the activities conducted therein remained distinctly Asian (Skowronek, 1998b). Those wishing to visually experience the Spanish colonial Philippines should visit the city of Vigan on Luzon Island (Figs. 9–11). Founded in the late sixteenth century, it, unlike Manila, survived the ravages of World War II and played a central role in Zialcita and Tinio's work.

The largest ethnoarchaeological project was conducted by the University of Arizona among the

Fig. 9 Historic Spanish colonial streetscape in Vigan (photograph by the author, 1995)

Kalinga (Longacre and Skibo, 1994). Based on 20 years of research among the pottery-making Kalinga of Luzon, in the northern Philippines, it presents at several scales—the pot, the household, the community, and the region—studies on pottery production, the use life of pottery, breakage patterns, form and function, and the regional exchange of ceramics. In this study, the team explored how human behavior and material-culture variability are linked. Ethnoarchaeological projects can identify and measure these linkages in ways that can then be tested in purely archaeological contexts. The notable goal of this project is admirably achieved and should provide much-needed insights into continuity and change in earthenware traditions in societies that are on the cusp of the early modern industrializing world (Skowronek, 1998c:100–103).

Guam and Micronesia

In the century following the capture of the Spanish Marianas by the United States, most archaeological work has focused on prehistoric Chamorro habitation and burial sites (e.g., Thompson, 1932). U.S. National Park Service Regional Archeologist Erik Reed (1952:94) lamented that "Only comparatively little has remained from the 230 years of Spanish occupation, between the normal ravages of time and vegetation and the effects of typhoons and earthquakes, and the destruction of Agaña in July 1944 and other activities connected with the late war." Reed's survey of the island mentions the ruins of the Spanish-period Torres house in Agaña (see Fig. 3); a stone staircase on Orote Point; a church, convent, and three fortifications in Umatac (for the location of the mission, see Fig. 3); and three stone bridges still standing on the island (Reed, 1952:95, 97, 99–102). A quarter of a century later, in 1976, only nine sites with standing architecture dating from the Spanish period were listed in the *Guidebook to the Architecture of Guam* (Ruth et al., 1990:21–32).

Clearly, many of the sites were damaged or destroyed as a result of military actions associated with the recapture of the island and in the subsequent development of the territory as a U.S. base for naval

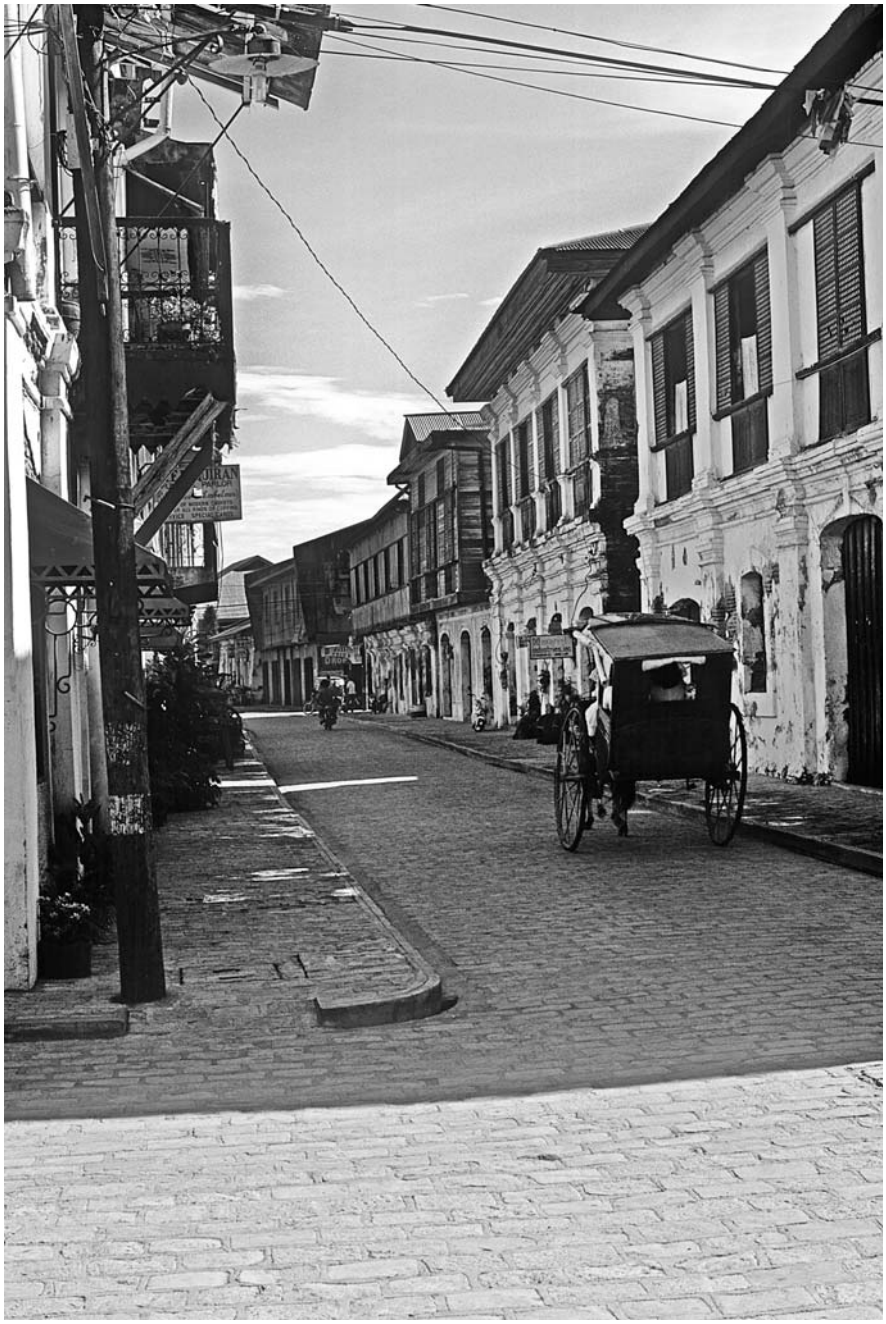

Fig. 10 Historic Spanish colonial streetscape in Vigan (photograph by the author, 1995)

and other military activities. Archaeologists who worked at Orote Point in 1978 mention the presence of bomb craters (McCoy et al., 1978:4–5) near Fort Santiago and a number of associated Spanish-period features. Similarly, excavations off of the Plaza España in downtown Agaña noted 6-foot-deep craters caused by the explosions of bombs and shells (Welch et al., 1992).

For all of the destruction wrought by World War II and the subsequent cleanup and development activities of the twentieth century, archaeological investigations of Spanish colonial sites are proving

Fig. 11 Vigan's cathedral (photograph by the author, 1995)

fruitful. The leading agencies in these endeavors are the Micronesian Area Research Center and the U.S. National Park Service. In Agaña during 1983–1984, the Micronesian Area Research Center at the University of Guam undertook the archaeological investigation of Guam's pre–World War II Government House, Spain's Governor's Palace. These excavations revealed evidence of life on the edge of the eighteenth- and nineteenth-century Spanish colonial world. *Ladrillos* (bricks); *tejas* (roofing tiles); and wrought, cut, and wire nails represented aspects of the construction of the building. Glass containers similarly represented a cross section of technological change in these nascent years of the Industrial Revolution, as they include everything from "olive green" blown wine bottles to three-piece-molded containers with hand-finished lips. Most revealing of this lifeway is the range of ceramic artifacts. They include majolicas and burnished earthenwares from Puebla, Tonalá, and Guadalajara in Mexico, English-made refined earthenwares, European- and American-made stonewares, and a variety of Asian-made porcelains (Schuetz, 1986:105–119). Perhaps as interesting as these obviously imported ceramic vessels was the high incidence of locally made earthenwares in all of the deposits.

A few steps from the Governor's Palace on the Plaza de España, another excavation has recently contributed to our knowledge of the Spanish colonial presence on Guam. Conducted by the International Archaeological Research Institute, Inc., behind the Catholic cathedral that stands on the old colonial plaza, this project has revealed intact, nineteenth-century deposits of artifacts, ecofacts, and architectural features. Faunal dietary evidence included the remains of cattle, pigs, goats, deer, chicken, and fish. Ceramic artifacts include Spanish empire-made majolica, English-made refined earthenwares, Scottish- and American-made stoneware bottles, Chinese Canton-made blue-and-white porcelains, and Japanese porcelains (Welch et al., 1992). The majority of these materials date from the mid-nineteenth century, ca. 1840–1870.

Although little subsurface excavation was conducted on this eighteenth- and nineteenth-century Spanish site, intact prehistoric features suggest that an intact historical-period Spanish component may still be preserved. Recovered artifacts all date to after 1785. This information is revealing because it was in that year that the Spanish opened up Manila as a free port to traders of all nationalities. The comparison of nineteenth-century Spanish colonial sites will help us understand how colonialism radically changed after the beginning of the age of commercial capitalism.

Evidence from Shipwrecks

The submerged cultural resources of the Marianas began to receive their share of archaeological attention in the last two decades of the twentieth century. The most comprehensive survey of these resources was conducted by the U.S. National Park Service (Carrell, 1991). The 600-page volume reporting on this work presents archival information on maritime commerce and losses from the sixteenth through nineteenth centuries. Archaeologically, however, the discussion focuses on the wreckage of ships and aircraft from the World Wars I and II. Nonetheless, there has been archaeological work conducted on three Manila Galleons, *Santa Margarita*, *Nuestra Señora de la Concepción,* and *Nuestra Señora del Pilar de Saragoza y Santiago* (see Fig. 4). The work on these shipwrecks was initiated by commercial salvors, but in every case the projects and their methods were overseen by local government agencies and, as such, have yielded excellent information on these precious resources.

The *Santa Margarita* left the Philippines for Mexico on July 13, 1600, with 300 passengers on board. Less than 2 weeks after it cleared Manila Bay, it was struck by a typhoon and heavily damaged, losing topmasts, opening seams, and damaging its rudder. Weathering that storm, the vessel was patched together and continued sailing eastward. For the next 5 months, the vessel encountered storm after storm. Starvation and disease decimated the crew and passengers, until it was decided to turn back to the Philippines. The ill-fated *Santa Margarita* limped westward and anchored off of Rota in 1601 (see Fig. 4). There, the local Chamorro populace was asked for food. When the Chamorro saw the weakened condition of the 40 survivors they began to strip the vessel of its fittings and remaining cargo. The survivors were picked up the following year by another Manila-bound galleon. IOTA Partners of Bellevue, Washington, initiated work in the vicinity of the wreck site. Archaeologists who have worked on this project include Margaret Rule, and most recently Eusebio Dizon and Jinky Smalley Gardner. The remains of the *Santa Margarita* have not been located. Nonetheless, IOTA's report to the Commonwealth of the Northern Mariana Islands (IOTA Partners, 1996:16–25) notes that the wreck site contained Chinese-made blue-on-white porcelains and Swatow porcelaneous stonewares, as well as a number of fragments of New World-made tin-glazed earthenwares. Also recovered were a number of glass beads, iron fasteners, brass tacks, and Chamorro-made earthenware fragments. Although it might be tempting to attribute the latter as evidence of the initial succor afforded to the survivors by the Chamorro, a more parsimonious interpretation might be that all of the artifacts thus far identified are from a survivor camp or indigenous village that is eroding into the sea.

Lost in 1638 off of Saipan, the *Nuestra Señora de la Concepción* is the most completely excavated and reported Spanish colonial-era wreck site in Oceania (see Fig. 4). As with the *Santa Margarita,* the vessel sheltered hundreds of passengers until its loss during a September storm on Saipan's surrounding reef. Only a few dozen people survived (Mathers and Shaw, 1993:33). In the years after its loss, the wreck was partially salvaged by the local Chamorro populace and Spanish salvors. More recently, it was excavated in 1987 and 1988. This project, featured in *National Geographic* (Mathers, 1990:39–52), demonstrated that the remains of the Mexico-bound vessel still bore an incredible array of gold filigree jewelry and personal accoutrements, iron ship fittings, glass beads, Chinese-made porcelain tablewares, and Asian-made stoneware storage vessels. Many of the storage vessels bore shippers' marks. It is interesting to note that of the 156 intact storage jars recovered only one was of European-made earthenware, the so-called "ubiquitous" olive jar, known throughout the Americas (Mathers et al., 1990:443–444).

Finally, there is the wreck of *Nuestra Señora del Pilar de Saragoza y Santiago*, lost in 1690 off Agaña, Guam (see Fig. 4). The work on this vessel was initiated by a private group of investigators from Australia with laboratory support from the University of Guam. A monthly report by past project archaeologist R. Duncan Mathewson III (1992) and a 1999 personal communication from project archaeologist Jinky Smalley Gardner indicate that while no organic structural remains had been identified, iron fasteners, silver coins, and three claws from Mexican black bears have been recovered. Significantly, the wreck site has also yielded hundreds of fragments of earthenware storage vessels—olive jars.

Concluding Remarks and Future Directions

In the two short decades since the first concerted effort at historical archaeology by the Philippine National Museum, a descriptive baseline of the Spanish colonial era has begun to emerge. Although the vast majority of this work has been to support the reconstruction of Intramuros in downtown Manila, the work in Mindanao has the promise to reveal more about cultural continuity and change during the Spanish regime. Two other locations have the promise of shedding light on the Spanish Philippines. Vigan, on Luzon, has the potential of becoming another Colonial Williamsburg. Unlike Manila and Cebu, which were badly damaged during World War II, it could become a destination for Filipinos and other nationals for experiencing firsthand the Spanish era and could be for archaeologists a wonderful locale for studying the colonial experience over a four-century period. Another important site, one that might be seen as the Pompeii of Asia, is Cagsaua in Albay Province on the southeastern corner of Luzon. This eighteenth-century community was buried under volcanic ash in 1814. Today it is preserved as a national park. Archaeologists should find a time capsule of life in the era of Latin American independence. Those planning to investigate this site should work through the Institute of Bikol History and Culture housed at the Ateneo de Naga University in nearby Naga City, as they are actively involved in regional research.

Measuring the rate of cultural continuity and change is one of the major contributions archaeology makes to cultural anthropology. These recent projects have components that date from the sixteenth through late nineteenth century, and include artifacts that are indicative of colonial global trade networks and their acceptance into the indigenous status system. For example, a seventeenth-century burial site in Surigao del Norte on Mindanao (Bautista et al., 1994; de la Torre, 1994) contained grave goods of alleged Dutch origin. Given the proximity of the trading center of Batavia (Jakarta) on Java in the Netherlands East Indies, this discovery is not anomalous, but lends itself to comparisons with similar materials from similar contexts in seventeenth-century New York, New Jersey, and Pennsylvania. What materials made in the Netherlands were part of the trader's kit? How did these materials arrive in Mindanao, and did they displace locally produced items of similar function?

Considering the impact of Spanish colonialism should go beyond restorations and descriptions of Spanish colonial building. One of the most promising studies might focus on the collections made by Carl Guthe (1927, 1929) from over 500 burial sites between 1921 and 1924. As Dizon (1994a:197, 201–202) notes, it was this collection, housed at the University of Michigan, that has fueled four generations of Philippines research from that institution (e.g., Aga-Oglu, 1946, 1948). What is most important is that a portion of the graves date to the Spanish period and contain American-, English-, Dutch-, and Spanish-made ceramics from the eighteenth and nineteenth centuries (Baccus, 1989). Their presence begs the question regarding what Asian-made materials they replaced and why.

Similarly, there is terrific potential for exploring the effects of the missionization process. When it came to missionizing the archipelago, it was akin to a gold rush. Often a single island or region would receive Augustinian, Franciscan, and Jesuit missionaries. Did the differing world views of the competing orders result in tangible differences among the neophytes in their subsistence regimen, housing, or public structures?

There is a huge need for more ethnoarchaeology, especially as traditional craft manufacture disappears

as the Philippines becomes one of the economic tigers of Asia. One of the nicest studies of blacksmithing was conducted 5 km southeast of Cebu City in Barangay Basak-Pardo. There, 12 shops forged knives, *bolos* (machetes), butcher knives, horseshoes, and plowshares. These shops have been in operation since the 1890s, but tradition has it that this method of manufacture is of an antiquity that predates the Spanish arrival. The authors (de la Torre and Tubalado 1990) feel that the technology being used is pre-Spanish in style. Overall, theirs is a good report on the ethnoarchaeology of blacksmithing that merits a follow up to provide a definitive answer.

Ethnohistory

A 5-year voyage of scientific inquiry (June 1789 through September 1794) carried Captain Alejandro Malaspina and his crew of naturalists, hydrographers, ethnographers, and artist-illustrators around the globe to the corners of Spain's far-flung colonial empire. In addition to visiting ports the length of South America and Mesoamerica, the navigator in his two ships—the *Descubierta* and the *Atrevida*—traveled as far north as Nootka, making a stop at Monterey in Alta California. His voyage continued across the Pacific to Guam and the Philippines before returning to Iberia. While some of the expedition's illustrations and observations have been published (e.g., Cutter, 1990; Driver, 1990; Madulid, 1987), the complete report of the circumnavigation has only been recently published in Spanish through the Museo Naval in Madrid (Higueras Rodríguez, 1985, 1987). Similarly, Otto von Kotzebue, captain of the Russian ship *Rurik*, is famous in California for his descriptions of the Franciscan missions of the San Francisco Bay region. A supercargo on his vessel was the illustrator Louis Choris. As part of the same cruise that carried them to California, they also visited Guam in November 1817 (Carrano and Sanchez, 1964:127–133; Choris, 1822).

Shipwrecks

The fabled Manila Galleons have received attention because of the exotic cargoes they carried from Asia to the Americas (e.g., Lyon, 1990; Mathers and Shaw, 1993; Schurz, 1939), but once we get beyond these exotica what can they tell us about changing market preference and colonial economics (e.g., Galvin, 1964; Fournier-García, 1997)? Dr. Peter Grave of the University of New England in Australia and his students have used instrumental NAA to study Asian-made stoneware storage containers recovered from Manila Galleon wreck sites. As a result of these investigations, new insights regarding production and exchange in the interior of Southeast Asia during a relatively unknown protohistoric era have been revealed. Perhaps others will undertake a comparative study of jewelry from the Acapulco-bound vessels with those of the New Spain flota of 1622, the famed (or infamous) *Atocha* and *Santa Margarita*. Such studies will provide new insights to students of art history and costuming on Asian and Latin American influences in personal adornment in the seventeenth century and beyond.

Comparative, Systemic, Diachronic Study

This chapter began with a lengthy discussion of how geographical areas come to be incorporated into colonial systems. It was suggested that a combination of geographical, technological, and internal sociocultural constraints with larger external systemic concerns led to the creation of "productive" versus "protective" colonial areas. As anthropologists, we are charged with not simply describing our observations, but also explaining them. In fact, we are seeking to understand the "ethnogenesis" of the Spanish-speaking world. To be able to meet this task, we must understand the forces that shaped the colonial experience. That means a view that is not simply based on missions or presidios (e.g., Bense, 2004; Graham, 1998; Williams, 1992), but all manifestations of colonial life—from protohistoric, indigenous villages to shipwrecks, ranchos, and colonial cities. A few researchers (e.g., Hoover, 1992; Majewski and Ayres, 1997; Wade, 2008) have called for such a systemic approach. Such an approach cannot, however, focus on a colonial region as a closed entity. It must be contextualized through comparative synchronic and diachronic research on other, comparable regions. This clearly is not a new idea, as James Deetz (1991:1–9) advocated the international comparative approach that has been so influential among

his students and others in South Africa, Australia, and Ireland. The model presented in this chapter may well be useful for such comparisons in the Spanish colonial world.

In conclusion, it is important to note that the Philippines, Guam, and at least Alta California in the North American borderlands all began to change in the 1830s. What were largely ecclesiastical, insular frontiers with production aimed toward meeting local or regional needs were transformed into secular, wage-based plantation economies intended for the nascent Atlantic/Western European–centered global economy. Their produce—whether hides, hemp, or copra—was meant for the burgeoning capitalist, industrializing economies of the United States and Britain. Historical archaeologists as social scientists have the ability through the material and documentary record to measure how changing economies changed the lives of people and in turn created today's global economy. Many would point out that this economy is homogenizing global culture. It is our job to decipher how the first aspects of this homogenization took place in the early modern era.

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Exploration, Exploitation, Expansion, and Settlement: Historical Archaeology in Canada

Dena Doroszenko

Introduction

Canada's great geographic expanse has seen archaeological investigations of not only prehistoric occupations but also of sites relating to European exploration and subsequent settlement of areas from the Atlantic to the Pacific coasts as well as to the Arctic areas of the country. As a result, since the nineteenth century, Canadian archaeologists have explored the vast and rich history of archaeological sites of national, provincial, and local heritage interest. Following a discussion of the development of historical archaeology in Canada and the evolution of academic programs focusing on the field, the remainder of the chapter will summarize significant contributions and introduce the reader to some of the major historical archaeological sites in the country. The following broad geographic regions will be used to structure the discussion: the Atlantic region, Quebec and Ontario, the Prairies, and the West Coast (Fig. 1).

History of Historical Archaeology in Canada

Probably the earliest example of historical archaeology in Canada was conducted by J.W. Dawson in the 1860s on what he considered to be the historic Hochelaga, a St. Lawrence Iroquoian fortified village near present-day Montreal, Quebec, visited by Jacques Cartier in 1535 (Kidd, 1949). From the late nineteenth century through the early twentieth century, there were a number of other archaeologists who demonstrated an interest in historical-period sites. These included T. Edwin Sowter, W.F. Ganong, Samuel Kain, Charles Rowe, W. D. Lightall, and Henry Phillips, to name a few.

It was not until 1919, however, that the Canadian government recognized the need to commemorate and celebrate its past. It was in that year that the Advisory Board for Historic Site Preservation met and was renamed the Historic Sites and Monuments Board of Canada. This was preceded by the setting aside of historic Fort Anne in Annapolis Royal, Nova Scotia, in 1917. In 1930, the National Parks Act allowed Cabinet to set aside lands as national parks. In 1953, the National Historic Sites and Monuments Act gave the government the legislative mandate to establish historic parks and sites. But it was not until the 1960s that a number of significant park projects began. With the development of the Fortress of Louisbourg (see Fig. 1), multidisciplinary teams that included historians, architects, engineers, conservators, curators, and archaeologists focused their attention on the preservation and restoration of historic sites.

As early as the mid-1980s, Parks Canada and many provincial ministries and agencies involved in the management and research of historical-period sites began to experience financial constraints. In the 1990s, Parks Canada moved to agency status. Professional and Technical Service Centers are spread across the country, located in the former regional offices in Halifax, Quebec City, Ottawa, Cornwall, Winnipeg, and Calgary.

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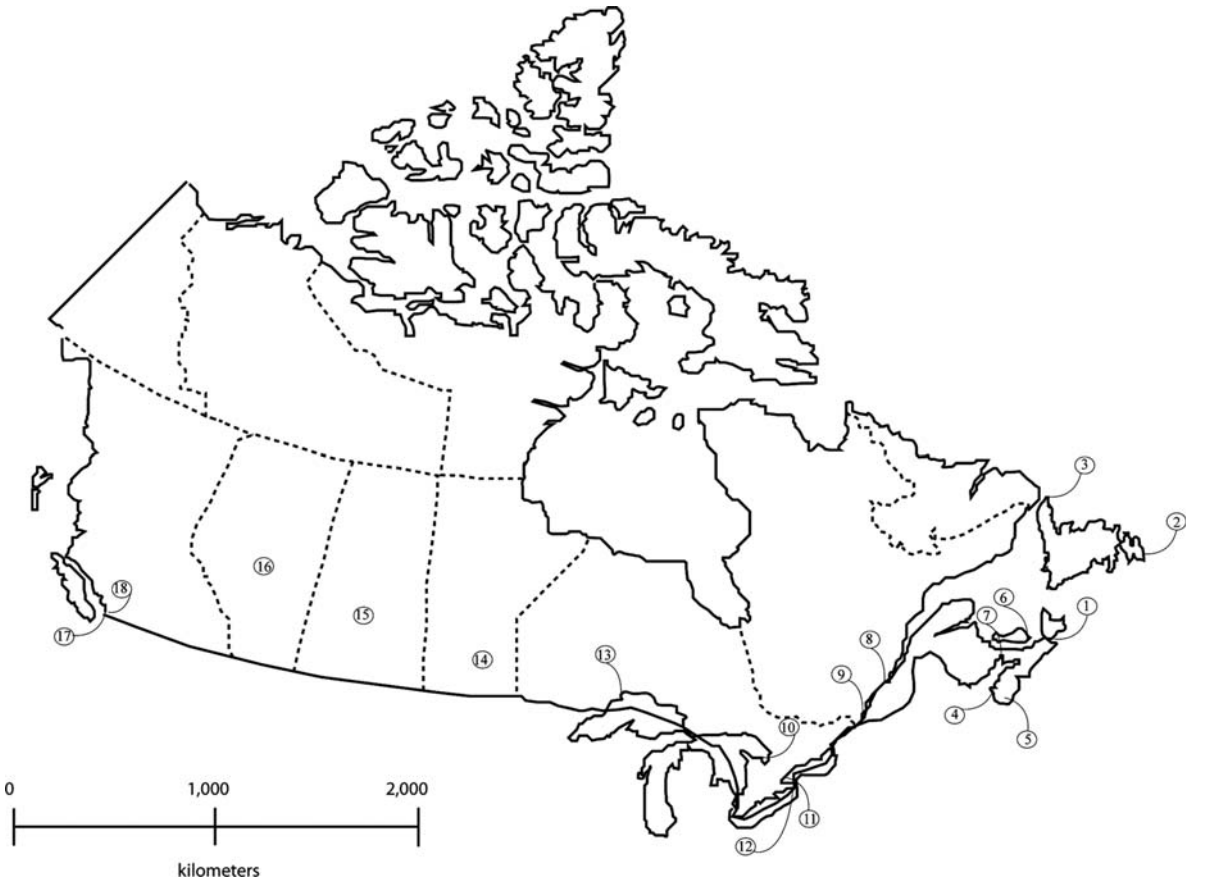

Fig. 1 Map of Canada showing locations of archaeological sites mentioned in text: (1) Fortress of Louisbourg National Historic Site, Nova Scotia; (2) Ferryland, Newfoundland; (3) L'Anse aux Meadows, Newfoundland; (4) Port Royal National Historic Site, Nova Scotia; (5) Birchtown site, Nova Scotia; (6) Roma site, Brudenell Point, Prince Edward Island; (7) Fort Beauséjour-Fort Cumberland National Historic Site, New Brunswick; (8) Quebec City, Quebec; (9) Point-à-Callière, Montreal, Quebec; (10) Sainte-Marie among the Hurons, Midland, Ontario; (11) First Parliament Site, Toronto, Ontario; (12) Snake Hill, Fort Erie, Ontario; (13) Fort William, Thunder Bay, Ontario; (14) Red River Settlement, Manitoba; (15) Doukhobor Pit-House Public Archaeology Project, Blaine Lake, Saskatchewan; (16) Fort Edmonton, Edmonton, Alberta; (17) Gulf of Georgia Cannery National Historic Site, British Columbia; (18) Fort Langley National Historic Site, British Columbia

Contributions by Parks Canada staff since the 1960s have resulted in myriad publications through series such as the *Microfiche Report* and *Studies in Archaeology, Architecture, and History*, which includes books on underwater archaeology (Bryce, 1984; Sullivan, 1986; Zacharchuk and Waddell, 1986), material culture (Jones, 1986; Jones and Sullivan, 1989; Karklins, 1992; Sussman, 1985; Woodhead, 1991), and archaeology (Light and Unglik, 1987). Older, discontinued series such as *Canadian Historic Sites: Occasional Papers in Archaeology and History* Numbers 1–26 (e.g., Sussman, 1979) and *History and Archaeology* Numbers 1–66 (e.g., Emerson et al., 1977; Jones and Sullivan, 1978; Wilson and Southwood, 1976) were also venues of publications.

The Federal Archaeology Office in Ottawa strives to increase Canadians' appreciation of and responsibility for their archaeological heritage. Through archaeological resource management, Aboriginal heritage programs, archaeological information management, material culture research, underwater archaeology programs, and publications, they provide the advice, information and expertise required to document, protect, preserve, manage, and make this cultural heritage accessible.

Over the past three decades, the Canadian Archaeological Association Bulletin (CAAB) (1969–1976) and the Canadian Journal of Archaeology (CJA) (1977–2006) have reflected the general interests of Canadian archaeologists. More province-specific publications can be found in such publications as Quebec's *Collection Patrimoines Dossiers* (published in French) and Ontario's *Ontario Archaeology* journal. Across the country, however, there exists an enormous quantity of unpublished manuscripts, reports, and papers in a variety of repositories including federal agencies, provincial government offices and agencies, amateur/avocational societies, museums, and universities.

Similar to the development of archaeology as a discipline in other countries, Canadian archaeology went through a number of stages. These stages include a period of antiquarianism, a period of developing cultural historical frameworks, and the development of archaeology as a discipline in academic institutions and museums (Handly, 1995; Jenness, 1932; Noble, 1972; Wright, 1985).

It was only with the opening of departments of archaeology at the University of Calgary in 1963 and at Simon Fraser University in British Columbia in 1971 that the discipline of archaeology became firmly established (Kelley and Williamson, 1996). Collectively, these universities began to produce far larger numbers of graduate students than in previous decades.

In general, historical archaeology in Canada developed out of an interest in fur trade sites and early contact period sites. This has not been true for the work of Parks Canada, however, owing to its focus on nationally significant historic sites. Despite Parks Canada's interest in nationally significant sites, a broader interest in historic preservation was growing across the nation's provinces during the 1960s. This resulted in following the model of Parks Canada when it came to reconstructions and/or restoration projects. By the 1970s, a number of province-level agencies had been formed and were beginning to include archaeology as part of their research strategy for their properties. As a result, a focus on the archaeology of historical-period domestic sites developed in a number of provinces in the mid-to-late 1970s, and it continues to be an important research topic. Large-scale urban archaeology projects began to occur across the country in the 1980s, sparking an interest in this topic that continues to this day, primarily in the context of cultural resource management (CRM) projects.

Public education programs, such as the one developed at the Toronto Board of Education's Archaeological Resource Center (ARC), evolved in the mid-1980s and ran for almost a decade until fiscal restraints at provincial and local levels resulted in termination of educational programs such as this one. Despite financial pressures, public archaeology is a growing trend across the country and can now be found in every province, practiced by professionals in association with federal and provincial agencies as well as universities and archaeological societies.

Atlantic Region

Approximately 1,000 years ago, Vikings traveled to Newfoundland and built a small settlement at L'Anse aux Meadows (see Fig. 1). Archaeologists uncovered the remains of six sod houses, a smithy, sauna, and cooking pits, along with artifacts such as a bronze pin and stone lamp beneath grass-covered mounds (Ingstad, 1977; Wallace, 1977, 1978). The lifestyles of these early settlers are depicted in reproduction sod houses constructed near the mounds, and reproductions of the artifacts are on display in an interpretation center.

Ferryland, Newfoundland (see Fig. 1), is home to the 1621 Colony of Avalon, one of the earliest British colonies in North America. The colony was founded by Sir George Calvert, the first Lord Baltimore, in Ferryland's inner harbor, known locally as The Pool. The colony changed hands in 1638 after Charles I awarded the entire island of Newfoundland to Sir David Kirke (Fig. 2). The Kirke family maintained a substantial fishing operation there for the rest of the seventeenth century. Ferryland was sacked by the Dutch in 1673 and again by a combination French and Micmac Indian forces in 1696. The English population returned the following year, and the harbor has been in continuous use ever since.

Fig. 2 Gold seals attributed to David Kirke discovered at Ferryland, Newfoundland (courtesy Dr. James Tuck)

Archaeological testing around The Pool has been carried out, in one form or another, since the 1930s. It was not until the mid-1980s that excavations led by Dr. James Tuck (Memorial University of Newfoundland) uncovered substantial ruins from the Colony of Avalon (Tuck, 1985, 1989a, 1996; Tuck and Robbins, 1989; see Harper, 1960). Dr. Tuck's findings led to a major project that began in the 1990s, still ongoing in 2008, which has exposed numerous features from the colony's earliest years, including foundations from Lord Baltimore's mansion (Fig. 3), commercial store houses, a blacksmith's shop, a privy/cesspool, fortifications, and portions of a cobblestone street. Hundreds of thousands of domestic and work-related artifacts from within these ruins offer tantalizing views into many aspects of seventeenth-century life, including foodways, trade networks, and occupational activities. Structural evidence includes massive dry-laid foundations, interior and exterior pavements, drainage networks, and a substantial stone seawall that formed the colony's quay.

Evidence of sixteenth-century European exploitation exists on the site in the form of English West Country, Portuguese, Spanish, and possible Norman or Breton ceramics recovered in contexts that apparently predate the fourth quarter of that century. Nearby, Native Beothuk encampments were found that contained large quantities of sixteenth-century European ceramics and iron fragments, including fish hooks (Tuck, 1999). The Beothuk sites are of particular interest as they represent some of the earliest Aboriginal contact with Europeans in North America.

James Tuck is also well known for his work in Labrador at the Basque whaling station at Red Bay, Labrador (Tuck, 1989b; Tuck and Grenier, 1981). When Red Bay was at its peak between 1550 and 1600 C.E., it was the largest industrial operation in the New World. Dr. James Tuck excavated the land site here between 1977 and 1992. The underwater site was excavated by Parks Canada during the late 1970s and 1980s, and the results of the extensive research have recently been published in five volumes by Parks Canada (Grenier et al., 2007). An interpretive center at the site highlights many of the archaeological discoveries. Tuck has been instrumental in developing the cultural tourism industry at Red Bay and Ferryland over the past two decades.

Castle Hill, Placentia Bay, on the Avalon Peninsula of Newfoundland, was the site of a French redoubt established in 1692, one of the defenses of Plaisance. It was ceded to the British in the Treaty of Utrecht who used it until 1811. Excavations were conducted in 1965, 1968, and 1969 by Parks Canada (Grange, 1971; Morton, 1970). Other notable sites in Newfoundland/Labrador investigated by Parks Canada include Signal Hill (Jelks, 1973) and Cupers Cove. Memorial University of Newfoundland continues to play a major role on the historical archaeological front with ongoing excavations at a number of sites, including Ferryland. William Gilbert, in association with the Baccalieu Trail Heritage Corporation, has excavated and surveyed a number of sites in this area, most notably in the Town of Cupids, where he is active in establishing

Fig. 3 Structural remains of Lord Baltimore's mansion in Ferryland, Newfoundland (courtesy Dr. James Tuck)

the location of the first colony of John Guy (Anton, 1996). Other outport towns across Newfoundland have initiated archaeological investigations because they have seen the value of doing so for increasing the heritage tourism potential of their communities (Pope and Mills, 2007).

At the Fortress of Louisbourg on Cape Breton (see Fig. 1), archaeological work by Parks Canada, beginning in 1959, was essential in providing specific information about structures where planning for reconstruction was already underway or around areas that would be disturbed. Beginning in 1961 until the present day, archaeological excavations have resulted in collections numbering more than 5,000,000 artifacts. Excavations at this eighteenth-century port over the past 36 years have resulted in a remarkable collection from approximately 50 properties reflecting the growth of the community. The extensive sites left by the British military during the sieges of Louisbourg have yet to be excavated (Burke, 1989). As a result, the amount of literature related to the site is too voluminous to provide in this chapter, and interested researchers are encouraged to contact the site directly for information. Public archaeology programs are held at the site annually (Fig. 4).

St. Peters Canal National Historic Site is situated in Battery Provincial Park, St. Peters, Cape Breton Island, Nova Scotia (http://www.pc.gc.ca/lhn-nhs/ns/stpeters/). In addition to the nineteenth-century canal, begun in 1854 and operational in 1869, there are other historic sites of interest, such as the fortified community of Saint Pierre, built by the French Compagnie de Breton as a fur-trading post ca. 1636 and operated by Nicolas Denys from 1650 to 1669. Test excavations to investigate the site were conducted in 1985 by Parks Canada. The archaeological evidence from this site is particularly rich, because the site was destroyed overnight by fire in 1669 and never rebuilt (Hansen, 1989). Also of note is the settlement of Port Toulouse, built by Acadian colonists in 1713 after the French lost mainland Nova Scotia to the British. Port Toulouse soon became a major supply center for Louisbourg, 120 km to the north, originally rivaling Louisbourg in importance. To protect the new settlement and transportation across the isthmus, the French built a fort on the shore. Small-scale test excavations in the area were conducted by Parks Canada in 1985 (Wallace, 1985, 1986a, 1986b). Both the fort and the settlement were destroyed by the British in 1758

Fig. 4 Public archaeology program at the Fortress of Louisbourg in 2005 (courtesy Parks Canada/ Fortress of Louisbourg/ National Historic Site of Canada/Photographer: Rebecca Duggan, Image number: 20724E)

after their capture of Louisbourg. In 1793, as revolutionary France declared war on Great Britain, the British built Fort Dorchester on the summit of Mount Granville, the highest spot in the region.

Grassy Island National Historic Site, Canso, was the site of the flourishing Canso fisheries, in operation by the 1550s, and possibly earlier. The land was ceded to the British in 1713. Most of the site is on neighboring, privately owned islands. Parks Canada reports deal with the British material, which is vast and varied (see Ferguson, 1980; Hansen, 1986). The Melanson site, Granville

Beach, was a site of Acadian settlement established by Charles Melanson in 1664 and inhabited until 1755. Excavations were undertaken in 1984 and 1985 by Parks Canada (Crépeau and Dunn, 1986).

Outside of Parks Canada, the Nova Scotia Museum is responsible for the management and preservation of archaeological collections recovered in the province. This includes donated private collections as well as specimens recovered by professional archaeologists working under a Heritage Research Permit issued by the Minister of Education and Culture. At present, the museum manages over 25,000 archaeological specimen records and in excess of 175,000 artifacts.

Compared to elsewhere in North America, the subsequent growth of archaeology in the Atlantic region was slow. Only after the work by Parks Canada at Louisbourg did the province of Nova Scotia hire a professional archaeologist in 1968. St. Mary's University and St. Francis Xavier University hired archaeologists in the 1970s, and this led to the establishment of archaeology programs in the province of Nova Scotia. Parks Canada established an Atlantic Region Archaeology Section in Halifax in 1979, coinciding with research at Grassy Island National Historic Site.

The founding of Port Royal (see Fig. 1) in 1605 marked the beginning of French settlement in the region the French called Acadia. By 1750, about 10,000 Acadians had developed a prosperous agricultural community around the Bay of Fundy. The colonial power struggle that ensued between England and France came to a climax between 1755 and 1763. It was at this later date that the Acadians were expelled from Nova Scotia. Belleisle Marsh was settled by 1679, upriver from Annapolis Royal. By 1775, the year in which the settlement of Belleisle was destroyed, there may have been as many as 30 houses. Archaeological work in 1983 uncovered the foundations of one of the house foundations (Christianson, 1984). The frame house was built of wood on a fieldstone foundation and is an example of the French construction method known as *charpente*. A massive hearth, oven, and chimney stood at one end of the building. The walls were partly infilled with clay, and the roof was thatched. Over 5,000 artifacts were recovered, and these provide valuable insights into early Acadian life (Lavoie, 1988).

The habitation site of Baron Jean de Biencourt de Poutrincourt (1605–1613) has been reconstructed at Port Royal National Historic Site, Port Royal. The site was excavated in 1938 by C. Coatsworth Pinkney in preparation for the 1939 reconstruction. During recent years, there have been minor monitoring excavations by Parks Canada staff on the site preceding physical disturbance such as digging for new waterlines or other facilities. The excavated material shows that the reconstruction is not on the site of the original habitation. However, the original habitation was probably close to the reconstructed location (Guilfoyle, 1991).

Port Royal/Fort Anne National Historic Sites, Annapolis Royal, contain the site of the Poutrincourt wheat fields; the site of the French fort 1632–1636, and the Fort of d'Aulnay and his successors 1636–1710. Excavations were conducted in 1962–1963, 1965, 1968–1970, 1989–1992, and 1996–1997 by Parks Canada. The site is rich in material; the records, photographs, and artifacts are curated with Parks Canada, Halifax (Dendy, 1970; Dolby & Associates, 1996; Henderson, 1994; Leonard, 1994; Unglik, 1992).

The Birchtown Archaeology Project in Nova Scotia was sponsored in 1993 by the Shelburne County Cultural Awareness Society and by Saint Mary's University in 1994 (Niven, 1994). Birchtown (see Fig. 1) was a community originally founded by a group of freed slaves in 1783, followed by a second larger emigration of Black Loyalists in that same year. It was, briefly, the largest settlement of free Blacks in North America. Close to Shelburne, these settlers worked as laborers, carpenters, ship builders, and harbor pilots and competed for jobs with the people of Shelburne, leading to a riot in 1784. Birchtown's decline mirrored that of Shelburne and led to its eventual demise in the 1790s. Steven Davis's field school in 1994 discovered that the site was more complex than expected, apparently destroyed and intentionally buried at some time in the 1790s. Features uncovered during this interesting project included middens, house foundations, and a cellar hole (Niven, 1994). There are many other sites of notable interest in Nova Scotia, such as the Halifax Citadel (Parks Canada), Castle Frederick, and Shubenacadie Canal. All have been the subject of archaeological investigations.

Sites on Prince Edward Island include Port La Joye, the site of a French village established in 1720. The fort was built in 1726 and held until 1745; the British fort was established in 1758. Test excavations were conducted by Parks Canada in 1987, and in 1988, the house of Michel Hacheacute-Gallant, one of the village's first inhabitants, was excavated. There have also been excavations on the British Fort Amhert (Ferguson, 1990). On Brudenell Point, on the east coast of the island, the Roma site (see Fig. 1), associated with the 1732–1745 fishing and trading settlement of Jean Pierre Roma, director of the Compagnie de l'est de l'isle St-Jean, has been excavated in 1968 and 1969 by Parks Canada (Alyluia, 1979; Korvemaker, 1968–1969, 1969–1970, 1972).

The Archaeological Services Branch (ASB) is part of the New Brunswick Department of Municipalities, Culture and Housing. The mandate of the ASB is to preserve, manage, and develop New Brunswick's archaeological heritage. The branch administers the provincial archaeological collection of artifacts and site inventory, encourages fundamental and applied research, and promotes archaeological resource development through commemoration, site interpretation, publications, and exhibitions.

In New Brunswick, Fort Beauséjour (see Fig. 1), Fort LaTour, and the Enclosure site have been excavated by Parks Canada. Fort Beauséjour was built by the French in 1751 and occupied by them until 1755 when it fell to the British, who used it until 1833. Archaeological work at the fort has been extensive, with excavations in 1962–1963, 1965, 1966–1968, 1969–1970, 1975, 1978, and 1984, and a conductivity survey in 1990. Most of the material recovered date to the British occupation. There are more than 60 archaeological reports on the site. Most deal with the British occupation, as it had the longest duration (see Herst and Swannack, 1970; Rick, 1970:17–21).

Fort La Tour, Saint John, was built by Charles de la Tour in 1630–1631 and surrendered to d'Aulnay in 1645. The fort was returned to de La Tour in 1650 and then sold to New Englanders in 1756. Excavations were conducted in 1955 and 1956 by J. Harper for the Province of New Brunswick, and then in 1963 by Norman Barka under contract with Parks Canada (Barka, 1965; Geiger, 1957; Harper, 1956a, 1956b, 1957).

Fort Gaspareau was a fort built by the French in 1751 on Baie Verte at the mouth of Gaspereau River near Port Elgin, New Brunswick. It was ceded to the British in 1755 and burned in 1756. It was excavated in 1966 by Parks Canada archaeologists (Coleman, 1968; Harris, 1974; Long, 1974; Rick, 1970:23; Wade, 1975; Walker, 1967; Wylie, 1968).

Quebec and Ontario

The City of Quebec (see Fig. 1) has played a very important role in developing urban archaeology over the past 25 years in Canada. The city's efforts, carried out in collaboration with the province's Culture Ministry as well as Laval University, have included the elaboration of a framework for research in the urban context (L'Anglais and Mousette, 1994; Moss, 1993, 1994). Numerous projects have produced results affording new light on this UNESCO World Heritage Site's history and culture (Cloutier, 1997; Goyette, 1995; La Roche, 1994; Moss, 1997; Simoneau, 1995). In the 1990s, the Séminaire de Québec and the Musée de la Nouvelle-France, an occupant of the now extensive architectural complex, called in the city's archaeological team in advance of adding underground wings to the buildings (Moss, 2005).

Laval University completed an important research project on the Intendant's Palace site with the publication of a monograph synthesizing 10 years of research by the university's field school on this multicomponent site spanning three centuries of occupation. Sites investigated during the project included (1) Jean Talon's Brewery (1669–1675); (2) the Intendant's Palace (1685–1713); (3) the King's Storehouses (1716–1759); (4) a domestic occupation by squatters (1760–1852); and (5) the Boswell Brewery (1852–1967) (Mousette, 1993, 1994, 1996b).

The Provincial Culture Ministry has published, in French, a series of studies based on 20 years of research on the Place Royale complex in the heart of Quebec's Old Town, site of the foundation of the city by Samuel de Champlain in 1608. These publications are a hallmark for the study of both French and English Colonial America. They include 13 titles concerning the very large archaeological collection and 20 titles concerning thematic studies

(commerce, lifeways, social organization) (e.g., Mousette, 1996a; Tremblay and Renaud, 1990).

Work by Parks Canada at the Château Saint-Louis in Quebec City resulted in a major publication (Beaudet and Cloutier, 1990) that detailed the structural changes through centuries of occupation of this significant city landmark. The project uncovered the structural remains of outbuildings to the château, including an icehouse, greenhouses, and artifacts spanning several centuries of daily life on the Dufferin Terrace.

Montreal's birthplace, Pointe-à-Callière, underwent extensive archaeological investigations undertaken by the Old Port of Montreal Corporation beginning in 1989 (see Fig. 1) (Desjardins and Duguay, 1992). The investigations revealed evidence of native occupations on the site, the first French settlement, the fur trade, and the evolution of the site into an urban landscape, commercial hub, and port. Father Vimont held a mass celebrating the founding of Montréal, attended by Sieur de Maisonneuve and Jeanne Mance, among others on May 17, 1642, at Pointe-à-Callière, a point of land at the confluence of the St. Lawrence and another small river. On May 17, 1992, on the very same site, the Montréal Museum of Archaeology and History opened its doors. The museum owes its existence to the significant archaeological discoveries made on the site during the 1980s. In fact, the museum and its site are inextricably linked. Rising above evidence of more than 1,000 years of human activity, it houses remarkable architectural remnants including remnants of walls from the fortifications of Montréal, an inn, and a warehouse, displayed in situ with respect for their integrity, along with hundreds of artifacts.

The museum's goals and objectives are to conserve and exhibit the archaeological and historical heritage of Montréal, and to bring visitors to understand and love the city as it was and is, so that everyone can make a more active contribution to its present and future. Since it opened in 1992, Pointe-à-Callière has managed the archaeological collections of the City of Montréal. The remains and artifacts found at the Pointe-à-Callière and Place Royale sites are the basis of the museum's archaeological collections (Decarie, 1993). Artifacts and ecofacts from other excavations in Montréal are gradually being added.

At 214 Place D'Youville, just west of the museum complex in Old Montréal, an archaeological field school has offered through the Point-à-Callière Museum since 2002. The site has seen seven main periods of occupation, including the days of Callière's residence and the activities associated with Fort Ville-Marie.

The development of historical archaeology in the Province of Ontario dates back to the period of antiquarianism, but it was not until the work of Kenneth Kidd (1949) at Sainte-Marie I that projects related to the historical period began in earnest including Jesuit mission sites. The archaeology of Sainte-Marie among the Hurons (see Fig. 1) was reexamined and further tested during the late 1980s (Tummon and Gray, 1995) and more recently by John Triggs in the late 1990s (Triggs, 2004a).

Work by CRM firms in southern Ontario has added much to our knowledge of the province's contact period archaeology. This work reflects a growing movement across Canada regarding the practice of archaeology in terms of the relationship between professional archaeologists and First Nations communities. This evolutionary change stems partly from the desire by many practitioners to develop more direct, regularized interaction and communication in the decision-making process, particularly when human remains are found but more and more when the necessity to conduct full Stage 4 (mitigation or data recovery) excavations of major archaeological sites are to be carried out. The desire is to have more participation by First Nations communities that involves full discourse on the relevance of archaeology within the larger community but also now allows for the possibility of preservation of sites as opposed to full removal due to development. Some provinces, specifically British Columbia, are further ahead than Ontario in this process; recent changes to the Ontario Heritage Act, however, have set the stage for the future.

In Ontario, the Ontario Heritage Act provides for the conservation of heritage resources and provides the Ministry of Culture with the mandate to determine policies and programs related to the provincial interest in conserving, protecting, and promoting Ontario's heritage. The Ministry of Culture plays a key, ongoing role in development planning processes, by assisting and guiding municipalities, approval authorities, and public and private sector

developers in meeting the relevant Ontario Heritage Act requirements. The ministry also reviews investigations conducted by archaeologists and manages the land and marine resources documented by those investigations. The ministry holds an archaeological database that contains information on about 20,000 sites. In 2005, over 1,000 new sites were added as a result of archaeological investigations, approximately 200 of these dating to the historical period. The unit also develops operational policies, technical standards, guidelines, and informational material on archaeological conservation in Ontario. Ministry staff also work with the archaeological community, First Nations, and other groups and individuals who have an interest in conserving Ontario's archaeological heritage.

During the 1960s through the 1970s, a number of projects were carried out on fur trade sites (see Reid [1980a, 1980b], Dawson [1984], and Klimko [1994] for summaries). Work at Fort Albany (Kenyon, 1961), Fort William (see Fig. 1) (Cloutier, 1976), Fort Rouille (Brown, 1983, 1987), and Longlac (Dawson, 1967) examined the impact of the fur trade on indigenous populations and the resulting development of French and later, British occupations. Between 1960 and 1990, 25 fur trade sites were investigated in northwestern Ontario. The research focus for most of these projects was to locate, identify, and describe individual posts, and as a result, the coverage and depth of analysis in the reports produced vary. By the late 1970s, interest in small historical-period domestic sites developed and continues to this day, particularly as a result of the development, in the 1980s, of a very busy consulting industry in southern and northern Ontario.

Work by the Ontario Heritage Trust, formerly the Ontario Heritage Foundation, began in 1970 and has resulted in the excavation, preservation, and protection of 112 sites across the province through ownership or conservation easements. Work on several of these sites has been elaborated on by Doroszenko (2003; Doroszenko and Gerrard, 1991).

Early in the 1980s, interest in public archaeology projects could be seen across the province and particularly within the City of Toronto. The Front Street Archaeological Project, work of the Archaeology Research Centre, Toronto Board of Education, uncovered the structural remains of the Third Parliament buildings of Upper Canada. Interestingly, the First and Second Parliament buildings have recently been investigated in 2000 (see Fig. 1) (Dieterman and Williamson, 2001). Evidence of charred floorboards (Fig. 5) and foundation walls of the earliest buildings that were set afire by invading American troops during the War of 1812 were revealed. A portion of this site has recently been acquired by the Ontario Heritage Trust to ensure its preservation for future generations.

Military sites in general, as is evident across the country, are also a focus for archaeological investigation in Ontario. In 1987, archaeologists working on a number of waterfront lots in Fort Erie discovered the remains of the Snake Hill cemetery, a U.S. military graveyard dating to the War of 1812 (see Fig. 1) (Litt et al., 1993; Pfeiffer and Williamson, 1991). At Fort York, in Toronto, extensive excavations were conducted over a 10-year period from the late 1980s to the late 1990s and continue today, as required. Parks Canada has an active archaeological program in Ontario, and work has been conducted and continues at various sites, including Fort George in Niagara-on-the-Lake, Fort Malden in Amherstburg, Fort Wellington in Prescott, and Fort Henry in Kingston.

Other major sites that have undergone archaeological programs in Ontario include: Dundurn Castle in Hamilton (Triggs, 1999, 2004b), Gage House in Stoney Creek, and the Naval Establishment at Penetanguishene (Triggs, 2005). One of the busiest organizations in Ontario is the Cataraqui Archaeological Research Foundation (CARF) located in the City of Kingston. Founded in 1984, CARF has played a major role in public archaeology and consulting archaeology in Kingston. Their focus on education and research has included a variety of public programs through the years as well as a museum component attached to their headquarters.

Prairie Region

The eighteenth century saw the earliest contacts with traders and initiated the commercialization of the Aboriginal economy through the fur trade. On the Plains, the introduction of the horse, and later, the rifle, intensified bison hunting and the sale of

Fig. 5 Charred floorboards discovered at the site of Ontario's First Parliament buildings in Toronto (courtesy Archaeological Services Inc.)

bison hides and by-products. This formed the basis of the early western Canadian economy.

The bulk of research in Manitoba, Saskatchewan, and Alberta can be characterized generally as either related to the fur trade period and/or settlement of this region of Canada. Parks Canada has conducted work throughout the western region at a number of national historic sites including Lower Fort Garry, the oldest fur-trading post built of stone still intact in North America (Monks, 1992; Priess, 1985), and York Factory, a Hudson's Bay Company fur trade post (Adams, 1985). Additional research has been conducted by academics interested in fur trade sites (e.g., Klimko, 1994).

In Manitoba, the earliest excavation in search of a fur trade post took place in the 1940s. Since then, over 30 fur trade posts representing different fur trade companies have been investigated as of the 1990s. Greg Monks, University of Manitoba, conducted a research program focusing on the evolution of the Red River Settlement (see Fig. 1) as a critical node in the northern fur trade during the nineteenth century in Manitoba (Monks, 1985, 1992).

Heinz Pyszczyk conducted archaeological investigations at the Hudson's Bay Company fur trade site, Fort Edmonton V (see Fig. 1) (1830–1907) beginning in 1992 (Pyszczyk, 1993). This important fur trade site, located on the Alberta Legislature grounds in Edmonton, was ideal for promoting archaeology and history to the general public. Fort Edmonton also served as the archaeological field school for the Department of Anthropology, University of Alberta, for 4 years. In 1995, the Provincial Museum of Alberta implemented a public archaeology program to celebrate Edmonton's 200th anniversary as a community. Pyszczyk (1997) has also researched the degree of use of European goods by Plains Indians in central and southern Alberta

The work of David Burley (Simon Fraser University) has included a settlement pattern and architectural study of Métis peoples in southern Saskatchewan (Burley et al., 1992), and the excavation of early fur trade posts on the upper Peace River of northern British Columbia (Burley et al., 1996).

One interesting research project was the 1996 mitigative recording and excavation of the Kirilovka Doukhobor Village Site in Saskatchewan by Western Heritage Services, Inc., a consulting firm based in western Canada (see Fig. 1). The Doukhobors are a pacifist Christian sect that formed as a reaction to religious and social reforms in seventeenth-century Russia. In 1899, 7,400 Doukhobors migrated to Canada to escape persecution and exile in Russia. The village of Kirilovka was built between 1900 and 1902 and inhabited for approximately two decades. Plans by the Saskatchewan Highways and Transportation Ministry were to remove a major portion of the site. During 1996 fieldwork, Western Heritage Services, Inc. recorded numerous features such as privy pits, wells, middens, and possible cellar pits (Kozakavich, 2006).

More recently, in 2004, Meagan Brooks (2005) conducted the Doukhobor Pit-House Public Archaeology Project in Blaine Lake, Saskatchewan. One of the objectives of this project was to actively involve the Doukhobor community in the excavation of two Doukhobor habitation sites dating to the early twentieth century (Fig. 6).

The West Coast

Historically, early contact with indigenous groups occurred much later than the eastern part of Canada and as a result, expansion into this area is traditionally viewed as a nineteenth century phenomenon. However, notwithstanding the appearance of Russian period fur trade sites, the fur trade period in this province is essentially British. In addition, other work on the west coast of Canada has focused on the contact period between Europeans and First Nation groups, the development of ranching, overseas Chinese studies, and an extensive underwater program.

Fort Langley is recognized for its role in the maritime and interior fur trade activities of the Hudson's Bay Company west of the Rockies in Canada (see Fig. 1). Established in 1827 and relocated in 1839, it became a significant center of cultural interaction and trade. Archaeological excavations at the fort and elsewhere in the region have uncovered evidence of human activity along the Fraser River as early as 8,000 B.P. (Steer and Porter, 1980).

Fort Rodd Hill is a coastal artillery fort built in the 1890s to defend the city of Victoria and the Esquimalt Naval Base. Fisgard Lighthouse was built in 1960 as the first permanent lighthouse on Canada's west coast. Both of these sites have seen archaeological work by Parks Canada (Steer and Rosser, 1982; Steer et al., 1979).

Parks Canada has also conducted work at Fort St. James (Snow et al., 1977) in central British Columbia. More recently, Parks Canada has been conducting research at the Gulf of Georgia Cannery National Historic Site (see Fig. 1). Since its construction in 1894, the Gulf of Georgia Cannery has been a landmark for fishermen. The archaeological resources at this site are related primarily to the human history of the West Coast fishing industry. The cannery is a complex of buildings constructed

Fig. 6 Excavations at the Doukhobor Pit-House Public Archaeology project in Blaine Lake, Saskatchewan (courtesy Meagan Brooks)

between 1894 and 1964 in response to changing technology and the needs of the industry (http://www.pc.gc.ca/lhn-nhs/bc/georgia/).

The Yukon and Nunavut

For thousands of years, Aboriginal people have lived and flourished on the land now called Nunavut and the Yukon Territory. By the mid-sixteenth century, southern Métis—mixed French Canadian and Cree—had crossed into northern Saskatchewan to bring the fur trade directly to the Aboriginal people of the area. This was the beginning of what was to become a distinct cultural group, the Northern Métis.

Soon after came the trader-explorers, searching not only for new areas in which to conduct their trade but also for the Northwest Passage, that elusive route connecting Europe with the Far East across the top of North America. Investigations of explorers in the territory of Nunavut have included searches for evidence of the voyages of Martin Frobisher (Auger, 2000) and Franklin (Beattie and Geiger, 2000).

The early nineteenth century was a period of intense rivalry between two fur-trading companies in western and northern Canada: the Hudson's Bay Company and the North West Company. During the first two decades of the nineteenth century, this rivalry spurred the construction of many more trading posts north down the entire length of the Mackenzie Valley. In 1821, these companies merged, and the new northern fur trade monopoly—continuing under the name Hudson's Bay Company—began a period of consolidating its operations.

Archaeology in the Fort Selkirk area was carried out in the late 1980s as a cooperative project of the Selkirk First Nation, the Yukon Heritage Branch, and Yukon College under the direction of Ruth Gotthardt and Norm Easton (Yukon College) with the assistance in 1989 of Greg Hare (Yukon College). The excavation at Fort Selkirk provided information about both the prehistoric and early-historical-period occupations at the site. Through extensive testing, many of the original buildings from Campbell's Hudson's Bay post of the mid-nineteenth century were located and mapped. At various locations in the town site, archaeological investigations uncovered traces of the more recent and well-documented history of Fort Selkirk—a history that saw the establishment of Harper's trading post and the Anglican mission as well as the Klondike Gold Rush during the late nineteenth century.

Historical-period Gwitchin and Inuvialuit archaeological sites in the Old Crow Basin in the Yukon include caribou fences or surrounds. Many of these have been described by Morlan (1973) and Greer and Le Blanc (1992). All of the caribou fences in the Old Crow Flats area are believed to date to the late nineteenth or early twentieth century, based on the use of metal axes in the construction. The caribou fences or surrounds are complex caribou hunting sites, which consist of wooden fence feeder arms; a corral-type structure at the head of the fence, where the caribou were snared or speared; and associated winter villages and cache structures.

The archaeological excavation of a late precontact/post-contact Gwitchin caribou hunting camp or village known as the Klo-Kut site, situated on the Porcupine River 10 km upstream from Old Crow, was started by archaeologist Dick Morlan in 1968 (Morlan, 1973). Morlan determined that the beginning of the historical-period occupation of Klo-Kut dated to between 1850 and 1880. Morlan also investigated a number of fishing camps in the Old Crow Basin area.

Conclusions

A number of trends and issues are evident across Canada as we approach the end of the first decade of the twenty-first century. While there appears to be high public interest and support for archaeology and the built heritage, there is a decline in government support on all levels. Several provinces are experiencing reduced funding for heritage while continuing to deal with outdated and/or weak legislation on the provincial level for the protection and preservation of archaeological sites. The paradigm shift in provincial governments from doer to enabler has resulted in decreased funds being directed to archaeological research. The federal rationalization and reorganization has led to centralization and coordination of functions within Parks Canada, which simultaneously is experiencing financial constraints and downsizing as a result of little or no succession planning. This has led to a shift in the labor force in historical archaeology on the federal level, because far fewer people are being attracted to employment in this sector due to fewer and fewer jobs being replaced. In many provinces, there is an increasing amount of CRM work being conducted, and it is the means by which most historical archaeological work in Canada is being conducted.

While several notable universities have faculty that specialize in the field of historical archaeology, no postgraduate degree programs have formerly been established. Nonetheless, universities such as Memorial University in Newfoundland, Laval University in Quebec, the University of Manitoba, the University of Saskatchewan, and Simon Fraser University in British Columbia have excellent records in teaching and mentoring graduate students in the field of historical archaeology. A number of other universities have also begun to recognize the need for academic training in this subfield, for example, Wilfred Laurier University in Ontario has instituted an undergraduate degree program in historical/industrial archaeology. In conclusion, despite the challenges of decreased funding and the general lack of strong, consistent preservation legislation, there still exists a vibrant community engaged in the archaeology of historical-period sites across Canada.

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An Embarrassment of Riches? Post-Medieval Archaeology in Northern and Central Europe

David Gaimster

> History gets thicker as it approaches recent times (Taylor, 1965:602).
>
> [S]everal knowledgeable people familiar with Brazil have advised me about the things I will need most when I arrive in the [New] Land. . . . Also, I have sure information . . . that a suit of clothes that costs around six Reichsthaler in Amsterdam could only with difficulty be made for sixteen in the [New] land. . . . Also, shoes, slippers, hats, and white linen cloth are as expensive in the [New] Land as in Amsterdam. . . . We are today, 8/18 January, putting out to sea in the name of the Highest, having waited out, praise God, a desired good wind. I ask Herr Morian most sincerely, if it is possible and can be done, to send me these items on the next ships going to Brazil (Stephan Carl Behaim, musketeer officer of the Dutch West India Company to Johannes Morian, January 1636, as he embarked to Brazil [Ozment, 1990:269–271]).

Introduction

The letters of three Behaim brothers, each from successive generations of a Nürnberg merchant family, provide a firsthand account of everyday life in early modern Europe. They vividly record personal experiences of some of the defining events and developments of the age, from the pressures of running a business and studying at a university to participation in the Thirty Years' War and service in a colonial army. The brothers are obsessed about their personal belongings, the state of their clothes, the quality of their food, and their home comforts. Each letter home, either to the family matriarch or their banker, allows a fleeting glimpse into the material concerns of the European merchant community. But such sources are rare, particularly those so personal and wide-ranging in their scope. Not everyone was literate and could record their experiences. The vast majority of the population of early modern Europe left no documentary legacy. What we have—wills, probate inventories, legal documents, etc.—belong almost exclusively to the ruling and professional classes. For many years, it has been recognized that any reconstruction of lifeways across the spectrum of post-medieval European society, whether in town or in the country, relies on the cross-referencing of a wide range of physical and historical sources of evidence. Continental and Scandinavian Europe, as distinct from Britain, has developed a particularly strong ethnological tradition in early modern historical studies, combining the study of oral, documentary, and curated evidence. But of all the material fields active in this area over the past 25 years, the development of an archaeological approach has made both a novel and by far the most dramatic impact, quantitatively and qualitatively, on the study of European post-medieval society and its technological development.

Any review of post-medieval archaeology in Europe must seek attempts at definition and subject identity among those working in the field. The exercise begs a series of fundamental questions. Most importantly, what is meant exactly by the rather general term "post-medieval" in a pan-European context? Is it period, culture, or material related? Can we detect in Europe the emergence of a distinctive historical subdiscipline with its own methods and theoretical approaches? How does the

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subject differ across such a diverse continent with such profoundly contrasting historiographies and research traditions? How has the archaeology of the post-Middle Ages on the Continent developed in comparison with the experience across the English Channel where post-medieval archaeology was formalized as early as the mid-1960s? This review will attempt to address some of these issues of definition and provide a critical analysis of the development and organization of the subject area as a whole.

This process has been facilitated by the recent publication of a number of surveys of post-medieval archaeology in European countries (see below). However, comprehensive coverage is beyond the scope of this short summary, and so I have chosen to concentrate on some of the more diagnostic and developed areas of this emerging discipline. Thus this chapter will focus on an examination of the impact of urban archaeology on the study of post-medieval society over the last 25 years, with a special emphasis on material culture studies, a growth area within the subdiscipline of post-medieval archaeology. It will also concentrate on the latest developments in northern Europe and Scandinavia and in their neighboring eastern and central Continental zones north of the Alps, areas with which I am most familiar through my own research experience. For a review of southern Europe and the Mediterranean, I recommend Marco Milanese's recently published collection of papers *Archeologia postmedievale: Società–ambiente–produzione* (Milanese, 1997b). For the purpose of this review, I am making use of Charles E. Orser, Jr.'s definition of "post-medieval archaeology" as a subject that specifically examines European material culture of the early modern period as a continuation of indigenous medieval culture (Orser, 1996:190–194, 1997). I shall avoid the term "historical archaeology," which in northern Europe has developed as a convenient shorthand for a methodological approach, mainly in the context of multiperiod (medieval to early modern) sites or subjects (e.g., Cinthio, 1984; Gaimster, 2005, 2006; Niukkanen, 1999), or refers generally to the study of post-classical literate societies (Andersson, 1997; Andrén, 1998:9–36; Andrén and Verhaeghe, 1997).

Organization

In contrast to developments in the United Kingdom (see Egan, this volume; see also Crossley [1990] and Gaimster [1994a]), post-classical archaeology in the rest of Europe remains a relatively young research field, with medieval archaeology emerging sometime before a separate identity for the post-medieval period. The experience in German-speaking countries exemplifies the developments well. Here, the formalization of medieval and later archaeology as an identifiable subject area can only be traced back to the mid-1970s with the founding of the *Journal for Medieval Archaeology (Zeitschrift für Archäologie des Mittelalters)* and the Working Group for Medieval Archaeology (Arbeitsgemeinschaft für Archäologie des Mittelalters) (AG M/N 6, 1995:6–7). It was not until the group's 15th conference in 1991 that the decision was taken to extend its remit to include the post-medieval period and rename itself in recognition of the work being conducted in this field (AG M/N 6, 1995:8–9). In 1999, the membership of the German Working Group, now the German Society for Medieval and Post-Medieval Archaeology (Deutsche Gesellschaft für Archäologie des Mittelalters und der Neuzeit), had grown to 336 members, of which around one-sixth stemmed from outside Germany (AG M/N 10, 1999:7). A sister organization has now emerged in Switzerland. The Schweizerische Arbeitsgemeinschaft für Archäologie des Mittelalters was founded in 1976 and added the suffix *Neuzeit* in 1994 (AG M/N 5, 1994/1995:34). In the neighboring Czech Republic, a working group for post-medieval archaeology emerged in 1982 out of the original medieval working group within the Institute of Archaeology of the Academy of Sciences of the Czech Republic (Smetánka and Žegklitz, 1990).

The international membership of the German Working Group, which is particularly strong in the Alpine countries, Scandinavia and eastern Europe, reflects the developing sense that the archaeology of the European medieval and later society is a distinctively international subject and that modern frontiers only serve to obscure the historical reality of long-distance trade and exchange and the cosmopolitan nature of European communities. The annual report of the group contains detailed information on the composition of the membership (profession,

academic background, gender, etc.) and provides an invaluable guide to the development of medieval and later archaeology in post-Reunification Europe. In Central Europe, therefore, and in Germany in particular, post-medieval archaeology is attaining formal recognition as a subject worthy of debate by the archaeological establishment. In 1994, the Association of German State Archaeologists (Verband der Landesarchäologen in der Bundesrepublik Deutschland) devoted their annual conference to post-medieval research and conservation issues. The following year, the proceedings of the meeting were issued as a separate volume of *Ausgrabungen und Funde* ("*Excavations and Finds*" 40[1], 1995), which was prefaced by Ingolf Ericsson's (1995) critique on the development of post-medieval archaeology in Germany or the "Archaeology of Modern Times" (Archäologie der Neuzeit).

In Germany, as in the United Kingdom or elsewhere, practitioners of post-medieval archaeology tend to work in museums, regional heritage and conservation agencies, or in the field. Few post-medieval archaeologists have university status, although the subject is finally being taught on a formal basis in university departments. Over the past 20 years, a number of Chairs of Medieval and Later Archaeology have been founded in German-speaking countries: at Bamberg (1981), Innsbruck (1989), Tübingen (1994), and Halle-Wittenberg (2005), and medieval and later studies are now a well-established component of archaeology classes taught at Hamburg, Heidelberg, Würzburg, Göttingen, Greifswald, Vienna, and Zürich (AG M/N 5, 1994/1995, and 6, 1995; Ericsson, 1995, 1999; Fehring, 1993; Felgenhauer-Schmiedt, 1993). In Scandinavia, there are separate departments for the medieval period (i.e., medieval and later) within the Institutes of Archaeology in Lund, Sweden, and in Aarhus, Denmark. During the 1990s, the University of Turku (Åbo) in Finland appointed a historical archaeologist to its chair in archaeology. Although it is possible to study medieval archaeology in Norway (at Oslo and Tromsø), there are no independent professorships (Andersson, 1993). Despite these initiatives, however welcome, post-medieval studies generally do not enjoy an independent status and are rarely taught as a subject area in their own right. Quite correctly, many of the major historical questions concerning European society are the same for both periods, but there is little recognition of how some of the more profound cultural changes of the early modern period (the Renaissance; the Reformation; the growth of mercantile capitalism, colonialism, etc.) might frame the questions in a new light or how approaches might be adapted to take account of the diversity of complementary historical sources that characterize the period (documents, iconography, ethnography, and others).

The university situation characterizes much of the establishment attitude toward the archaeology of Europe after the Middle Ages. The field scarcely enjoys a separate identity and is frequently regarded as little more than a chronological extension of medieval archaeology. In contrast to Britain, there is no research journal exclusively devoted to post-medieval archaeology anywhere on the Continent. Recognition of the subject, where it exists, stems in the main from the growth of urban rescue archaeology, which has transformed the material inventory for the early modern period over the past two decades (see below). However, in the worst-case scenarios, archaeologists working in medieval towns are forced to deal with post-medieval archaeology "because it is there," and they must record it "on the way" down to the underlying levels. The problem of recognition can be attributed to a combination of factors, including the failure to develop a research framework for post-medieval material culture studies and to the ongoing debate among archaeologists across the Continent concerning periodization and disciplinarity. The present character of European post-medieval archaeology reflects the training and academic background of most of its practitioners. Unlike the majority of their counterparts in North America who have been trained in the anthropological tradition, almost all come from an explicitly archaeological or historical background.

Defining the Subject

By far the greatest challenge facing post-medieval archaeology on the European continent is its chronological and methodological definition. Despite Eric Cinthio's (1984) attempt to isolate the

archaeology of the Middle Ages as a discreet subject in Scandinavia (see also Drake [1984] for further discussion), few archaeologists in the region have sought to address the issue. Those who have done so have refused to acknowledge a necessity for an independent archaeology of the post-Middle Ages (e.g., Mogren, 1995). The attitude is perhaps a product of the urban archaeological scene or the survival of monuments that are invariably multiperiod in character. As already noted, most European archaeological institutions prefer to treat the subject as a suffix to the main business of studying pre-Reformation culture. In a sense, the continuum approach is perfectly sensible and avoids the sticky problem of period division, a typically British tradition, which inspired the foundation of the Society for Post-Medieval Archaeology in 1966 but which imposes its own problems that can obscure rather than enlighten questions of continuity and change (Gaimster and Stamper, 1997a).

Recently, a number of Continental research projects have been launched on specifically multiperiod themes such as the archaeology of Hanseatic urban culture (e.g., Dunckel et al., 1999; Gaimster, 1999b, 2005; Gläser, 1993; Gläser and Mührenberg, 1997; Stephan, 1996). Moreover, papers given by Continental scholars at a joint conference hosted in 1996 by the Societies for Medieval and Post-Medieval Archaeology on "The Age of Transition: The Archaeology of English Culture 1400–1600" (see Gaimster and Stamper, 1997b) have highlighted the dangers of studying the post-medieval period in isolation from its precursor. Quoting the work of historians, two contributors—Verhaeghe (1997) and Courtney (1997)—questioned the traditional Marxist model used to characterize the fifteenth- and sixteenth-century transition from feudalism to capitalism, because it seriously underestimates the impact of mercantilism on late medieval (urban) society. Although focused on the English experience, the 1996 London conference was the first such international forum on the issue of the period divide between the Middle Ages and early modern period and was attended by archaeologists from across western and northern Europe. Its aim was to assess the physical evidence for both change and continuity. In virtually all of the case studies presented, it was noted that the rate and extent of development was not uniform and that tradition loomed as large as innovation in the lives of ordinary men and women. Although some changes of the period ca. 1400–1600 were sudden, momentous, and decisive, others were less so, including some that represented the culmination of a much longer period of change, if not evolution. However, it was hard to avoid the archaeological evidence for a number of major cultural and technological innovations that transformed the meaning and quality of life for large sections of the population, particularly for the emerging middle classes.

Cultural transformations in fifteenth- and sixteenth-century England included wider access to a new range of domestic goods and personal accessories, a greater emphasis on privacy and material comfort in the home, and the reconfiguration of public and private space. In equal measure, the discovery of the New World and the invention of gunpowder are two developments directly visible in the archaeological record—in the dietary habits of urban mercantile communities and in fortification design. In the domestic sphere, the period after 1450 is characterized not only by an increasing multiplicity of products, but in their new multidimensionality of material, form, and decorative treatment. Functional and technological innovations are most clearly visible in the late medieval to early modern ceramic record both in England and Europe (Gaimster and Nenk, 1997). The migration of ceramics from the kitchen and cellar to the center of the table represents the transformation of the medium from an exclusively utilitarian to a social commodity. Technological innovations such as the introduction of molded ornament based on contemporary printed sources transformed formerly utilitarian stoneware and stove tiles into fashion items in their own right by the early sixteenth century. These innovations are dramatic and distinctive. They help to distinguish the early modern domestic environment from that of the evolutionary Middle Ages. In England, these physical traces of change were recognized as justification for the creation of a new subdiscipline of post-medieval archaeology and were enshrined in the editorial of the first issue of the journal *Post-Medieval Archaeology* (Butler, 1967).

Although any formal consensus on an ending date for the post-medieval period has yet to be reached by European post-medieval archaeologists

(see Tarlow, 2007:1–33), the British research community has long recognized the mid-eighteenth century introduction of factory methods and modes of production as the watershed dividing early modern from industrial society (Butler, 1967). As with the transformations of the late Middle Ages, the British Industrial Revolution can trace its origins back into the preceding centuries, but its cumulative effect felt during the late eighteenth to early nineteenth century served to change society beyond recognition (Courtney, 1997:10–11). Its demographic, social, and economic impact in terms of population growth, the relocation of entire communities, increasing class polarization, and the development of an international colonial economy were decisive in creating a new material inventory. In Germany, in contrast, the new Archäologie der Neuzeit seems to make little distinction between early sixteenth-century Renaissance and Reformation culture and World War II air-raid shelters (e.g., papers in *Ausgrabungen und Funde* 40[1], 1995).

The danger with these arguments on periodization is that they will appear overly Anglocentric. The chronology of the British Industrial Revolution is unique in Europe. Britain became an industrial nation in terms of a producer and consumer over 100 years before many of her Continental counterparts. Even in western Germany, the introduction of the factory system and the migration of rural populations into the towns did not occur until the 1820s at the earliest (see Gaimster [1986] for the archaeological implications of this phenomenon). Thus, we are in a position to construct a unique "post-medieval/early modern/proto-industrial" epoch for each country or region in Europe, as Crawford's seminal 1967 paper on the Scottish experience or Sarvas's (1977) study of the Finnish regionality problem suggest. Some divisions might overlap, but most would be mutually exclusive.

If subject demarcation on temporal grounds alone seems an increasingly sterile exercise, most of the more recent discussions of the nature of post-medieval archaeology in northern and Central Europe have come down on the side of a general cultural definition corresponding to a broad post-Columbus/post-Gutenberg (Bible)/post-Schism/proto-Industrialization time frame (e.g., Carmiggelt and Hacquebord [1990] for the Netherlands, Verhaeghe and Otte [1988] for Belgium, Gaimster [1995] for Sweden; Smetánka and Žegklitz [1990] for the Czech Republic, and Taavitsainen [2001] for Finland). Indeed, Scandinavian archaeologists are now explicitly referring to "post-Reformation archaeology" (e.g., Bergen, 1983; Broberg, 1982; Mogren, 1995). This culture-centered division even coincides with thinking in Roman Catholic portions of Europe that were untouched by the Lutheran Reformation, but which were transformed materially by the Renaissance and the development of New World trading markets (see Milanese [1997a] for Italy and Amores [1997] for Spain). The Reformation in Britain and northern Europe has recently been debated as an archaeological question at the 2001 joint conference of the Societies for Medieval and Post-Medieval Archaeology (Gaimster and Gilchrist, 2003), while the impact of changes in social and religious mentality on sixteenth-century domestic material culture has recently been explored in a preliminary study by Gaimster (2000a). For others, however, cataclysmic events—such as the Black Death and the Thirty Years' War—are equally decisive in framing the material and mental map of early modern Europe (Hundsbichler, 1997).

Inevitably, any discussion of periodization relies on divergent criteria and can obscure rather than clarify the issue. In contrast, most commentators are in agreement over the question of methods. They are united, it seems, on the necessity of a pluralist approach to post-medieval material history that combines archaeological evidence with ethnographic, documentary, cartographic, iconographic (pictorial), architectural, and scientific sources. Thus it is this multidisciplinarity and cross-referencing potential of the subject, as a reflection of the wealth and variety of historical evidence available for study, which distinguishes the study of post-medieval archaeology from its longer-established sibling (e.g., Ericsson, 1995:10–12; Falk, 1996; Gaimster, 1995; Smetánka and Žegklitz, 1990; Stephan, 1980a). A recent project to reconstruct the household of a late-sixteenth-century miller's widow in the Netherlands from probate and archaeological evidence seems to represent what European post-medieval archaeology is all about (Baart, 1986a; ter Molen et al., 1986). Meanwhile, the sheer magnitude and diversity of the European post-medieval material inventory—in comparison to what survives from the preceding

Middle Ages—makes the post-medieval "finds mountain" a pivotal issue among Continental and Scandinavian researchers (Andersson, 1994). This recognition represents a radical change from the position of the 1960s and 1970s. Traditionally, the archaeology of the post-medieval period has been regarded as little more than supplemental to the main business of the documentary record and has suffered from the "handmaiden of history" syndrome. Today, as the first synthetic studies are published, the subject is tentatively beginning to frame its own historical points of reference as well as define its own distinctive methodological emphasis (Pajer, 1990).

The emergence of a multidisciplinary discipline for the post-medieval period is best illustrated in Austria where the National Academy of Sciences established the Institute for the Material Culture of the Middle Ages and Early Modern Period in 1996 (Institut für Realienkunde des Mittelalters und der frühen Neuzeit; see AG M/N 8, 1997:27). The Institute, based at Krems, Austria, has formed an archive of pictorial and iconographic sources illustrating contemporary material culture. The inventory of over 20,000 photographs offers a unique opportunity to examine archaeological artifacts in their physical, social, and functional contexts. Moreover, it is possible to view objects in use before the point of discard or loss. Certainly radical in the strictly compartmentalized central European research environment, researchers at the institute are initiating discussions on interdisciplinary approaches to medieval and post-medieval material culture studies (Hundsbichler, 1996, 1997). A recent publication of the institute, for instance, examines the archaeological potential of studying archaeological artifacts in the contemporary iconographic record (Jaritz, 1996). Similarly, now that the political barriers separating west from east have been dismantled, the work of eastern European institutes of material culture history is beginning to find a resonance among western researchers. A notable example is the Institute of Archaeology and Ethnology of the Polish Academy of Sciences in Warsaw, which publishes the *Quarterly Journal of Material Culture History* (*Kwartalnik Historii Kultury Materialnej*) containing a wide range of post-medieval archaeological and folk-history subjects.

Urban Archaeology

Over the last 25 years, the exponential growth of rescue archaeology across the European continent has transformed our existing understanding of life and lifestyles in the early modern town and city. Excavations in towns and cities have enabled archaeologists and colleagues in related spheres to make a physical measure of material consumption, production, trade, and diet among urban populations, both within individual communities and on an inter- and intrasite comparative basis (Falk, 1992). Urban redevelopment has been a particular feature of northwestern Europe, where a series of major urban archaeological projects have now been running, some of them for more than a decade and a half. Many of these projects, of course, are multi-period in their scope. Even though so many towns in the region trace their origin back to the Roman period, their post-medieval development has more recently been given considerable attention. In some areas, the early modern period has been the subject of special interest, nowhere more so than in the Netherlands, a country that was formed during the late sixteenth century and which became the cultural and commercial hub of northwestern Europe during the seventeenth century (see Schama [1987] for a picture of the Dutch Golden Age). Dutch urban archaeology of the post-Middle Ages has been the subject of recent surveys by Sarfatij (1995) and by Baart (1997).

In Scandinavia and the Baltic, there has been much interest in the archaeology of the post-medieval town, many of which were radically redeveloped or even established in the sixteenth or seventeenth century, a situation comparable to North American urban settlement. In Sweden, post-medieval archaeology seems to be thriving in seventeenth-century "new" towns such as Göteborg (Jönsson and Kihlberg, 1981) or in towns replanned after total conflagration such as Nyköping after 1665 (Hållans and Andersson, 1992) or Karlstad after 1719 and 1752 (Lundh et al., 1994). The Helsinki City Museum has recently published the results of extensive excavations in the Old Town of the Finnish capital, which was founded in 1550 as a regional center by the Swedish king Gustav Vasa and which was relocated in 1640 (*Narinkka*, 1994). The settlement represents a unique archaeological

time capsule for the study of urban material life in early modern Europe (Niukkanen, 2002). In Copenhagen, the Danish capital, the excavation of a town refuse dump has revealed a unique time capsule for northern Europe dating to the period 1750–1765. In addition to the ceramics, glass, and metalwork, the waterlogged conditions have produced rare survivals of contemporary clothing and footwear of both rich and poor, including extensive evidence for the recycling of dress and human hair (Høst-Madsen, 2005). The excavation has effectively launched post-medieval archaeology in Danish towns. Previously little, if any, archaeology had been conducted on post-1536 deposits (i.e., post-Reformation). City archaeologists in St. Petersburg, Russia's Baltic capital founded by Peter the Great in 1709, have recently produced the first monograph on the archaeology of this eighteenth-century metropolis (St. Petersburg, 1996).

In Germany, there exists a well-established tradition for a multiperiod approach to towns and cities established in the medieval period (Falk, 1992; Stephan, 1990). The Lübeck Archaeological Office (Bereich Archäologie der Hansestadt Lübeck), responsible for the capital of the Hanseatic League and a UNESCO World Heritage Site since 1987, has recently celebrated over 35 years of intensive urban excavation and research (Falk and Mührenberg, 1997). Performing its combined role of conservation agency and research institute, it publishes an annual monograph (*Lübecker Schriften zur Archäologie und Kulturgeschichte: Vorgeschichte, Mittelalter, Neuzeit*) that records excavation campaigns on rescue sites in the city. Since its foundation in 1978, the journal has provided a barometer of research trends in medieval and later urban archaeology in Germany and northern Europe. The journal is a rich source of information on medieval and post-medieval buildings archaeology, artifact studies, and the urban paleoenvironment.

Vigorous urban archaeology programs are now a feature of many of the Hanseatic cities around the Baltic rim, particularly since the Reunification of the region, and they are beginning to generate synthetic studies on trade and material culture (Gaimster, 1999a, 1999b, 2006). Of those with a strong post-medieval emphasis and the development of a special interest in artifact sequences, I would recommend Wismar (e.g., Buchholz, 1994; Hoppe, 1990, 1992), Rostock (Schäfer, 1990; Schäfer and Paasch, 1989), Stralsund (Gaimster et al., 2001; Möller, 1996; Schäfer, 1999; Schindler and Schäfer, 2001), Greifswald (Lüth and Schäfer, 1995; Schäfer, 1995), Elbląg (Elbing) (Gołębiewski, 1992; Nawrolski, 1987, 1997), Stockholm (see Chapters 10 and 11 in Dahlbäck [1983]; Hallerdt [2002]), Helsinki (*Narinkka*, 1994), Haapsalu and Tallinn (Mäll and Russow, 2000; Russow, 2002), Kalmar (Blohmé, 1995), and Malmö (e.g., Billberg, 1987) for key reports. Latterly, the 2005 exhibition and handbook reviewing 15 years of intensive urban rescue archaeology in Mecklenburg–Lower Pomerania forms a comprehensive overview of work following the fall of the Iron Curtain forms in the region (Jöns et al., 2005).

Elsewhere in northern Germany it is possible to trace an equally rich post-medieval archaeological tradition. Here much of the work carried out has been rescue-led, but there is a considerable number of long-term projects that have maintained a strong research dimension. Hans-Georg Stephan's and Sven Schütte's work in the Westphalian and Lower Saxon towns of Höxter, Hannoversch Münden, and Göttingen deserves a special mention here insofar as their studies of urban life have formed a blueprint for post-medieval material culture studies in north German towns (Schütte, 1978; Stephan, 1980b, 1980c) (Fig. 1). Finally, further rich and well-dated groups of post-medieval domestic refuse have been recorded at Höxter (König, 1989), Lemgo (Diedrich, 1989); Lüneburg (Andraschko et al., 1996; Büttner, 1997; Kühlborn, 1995); Einbeck (Heege, 2002), Heide in Schleswig-Holstein (Arnold, 1986; Arnold et al., 1992/1993; Lübke and Westphalen, 1989). Important, but rarely reported groups of nineteenth-century domestic artifacts have recently been excavated at the ducal residential town of Bergen on the island of Rügen (see Schäfer [1998] for a survey of post-medieval archaeology in the region).

Of all the major urban archaeology programs in northwest Germany, one stands out in particular in terms of its multidisciplinary scope and special attention to the late medieval to industrial sequence. The 10-year program of intensive excavation in Duisburg, a Hanseatic city located at the confluence of the Rhine and the Ruhr, has formed a unique urban material archive from over 70 sites. The

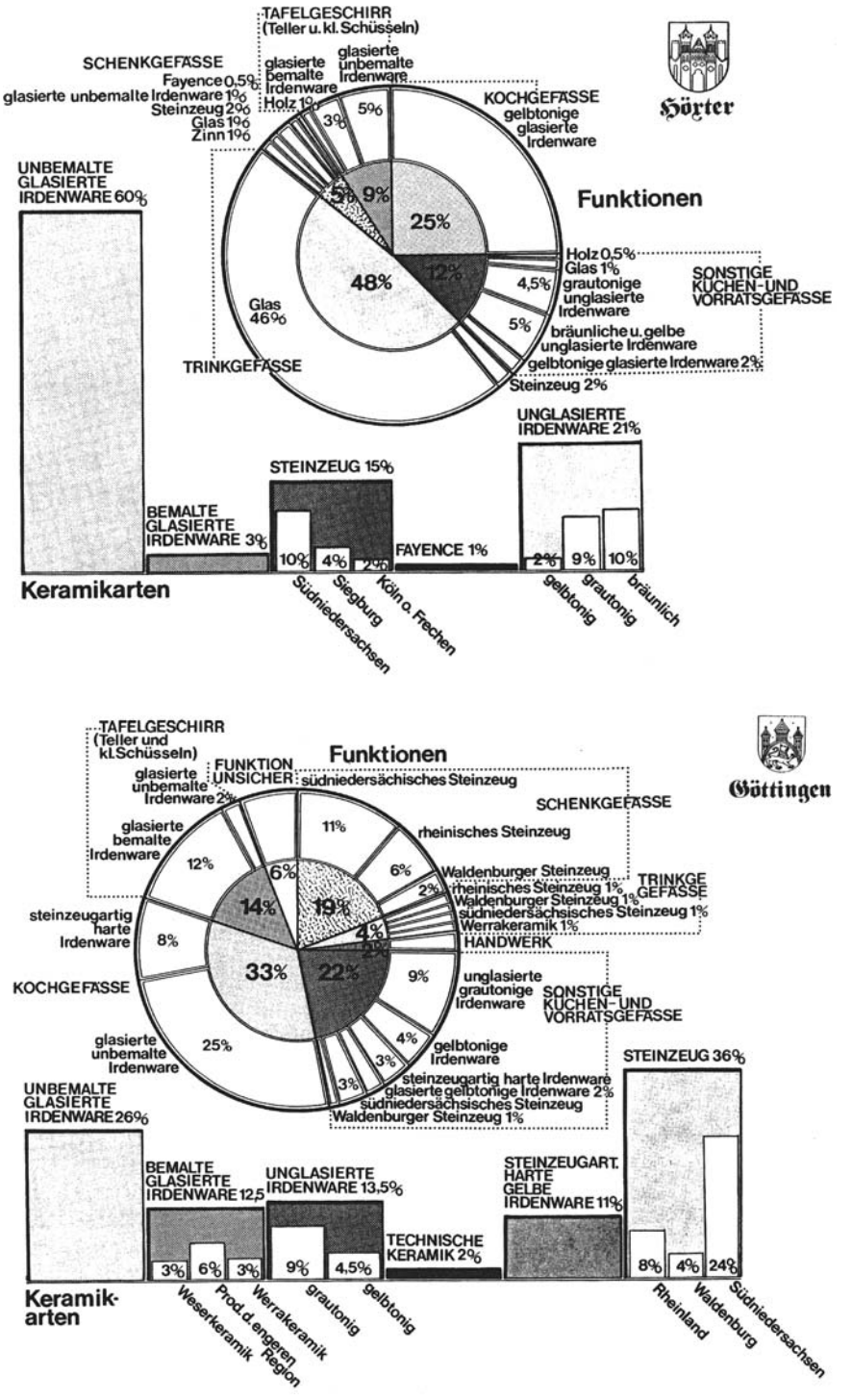

Fig. 1 Graphic representation of the comparative ceramic profiles of two Lower Saxon towns: Höxter, ca. 1500–1550 and Göttingen ca. 1550–1600. Bar charts indicate the relative aggregate proportions of ceramic wares found; the pie charts divide the wares into functional categories and show the extent of competition between ceramics and other household products (wood, glass, metalware, etc.) (from Stephan, 1980b:Fig. 16, courtesy Habelt Verlag, Bonn)

post-excavation analysis has produced a substantial corpus of reports on buildings, artifact types, and the paleoenvironmental evidence. A major monograph outlining the principal results of the project was published in 1992 (Krause, 1992), and it contains a series of studies on material consumption, dietary trends, urban pollution, and craft production among the town's citizens over the late

medieval to early modern period. Of particular interest is the evidence for the demographic, environmental, and material impact of industrialization on a city and its hinterland during the eighteenth to early nineteenth century (Gaimster, 1986, 2006). The Duisburg project was also the first of a growing number of urban archaeology projects in northwest Germany to lay equal stress on the post-medieval artifactual and ecofactual evidence (e.g., Wiethold [1995] for Lüneburg).

In contrast to the north and northwest part of the country and despite a number of initiatives in towns such as Frankfurt-am-Main (Döry, 1984, 1988), Heidelberg (Lutz et al., 1992), Nürnberg (Kahsnitz and Brandl, 1984), or Konstanz (Oexle, 1986), little in terms of long-term post-medieval urban projects have developed in southern Germany, where there has been a long-established focus on the region's Roman and early medieval settlements. An important exception is Walter Janssen's detailed treatment of the material culture and paleobiological profile of a ca. 1500 civic hospital in the Imperial town of Bad Windsheim, as recovered from a large latrine deposit (Janssen, 1994). In contrast, there has been much recent activity in the "new" federal states, such as Mecklenburg-Lower Pomerania (see above) and Saxony, where the rate of urban redevelopment has been stimulated by Reunification. Publications and public exhibitions on excavations in the historic triangle of Leipzig, Dresden, and Chemnitz have demonstrated the growing interest in the material culture of the medieval to early modern European city (Oexle, 1994, 1995a, 1995b).

The towns located downstream from Duisburg along the Rhine and the Maas demonstrate a long tradition for post-medieval archaeology. Dutch developments in the urban sphere have recently been synthesized by Jan Baart, city archaeologist for Amsterdam (Baart, 1997). Virtually all the major towns of the Netherlands have produced major monographs on their medieval to early modern sequences. Collectively they have generated the most extensive post-medieval urban inventory in Europe. The reports are particularly rich in ceramics and glass assemblages, and the extensive quantitative data provide an invaluable source for refined intersite analysis (e.g., Clevis and Kottman [1989] for Deventer; Clevis and Smit [1990] for Kampen; Thijssen [1991] for Nijmegen; Bitter et al. [1997] for Alkmaar; and Bartels [1999] for a survey of ceramic finds). Of particular interest are those sites that offer a documented social context such as the excavations on the site of a known merchant family of ca. 1760–1840 in the Nijmegen Smidsstraat (Thijssen, 1984).

Perhaps the greatest post-medieval urban archive in the Netherlands has been generated by three decades of excavations in the center of Amsterdam. The 1972–1979 excavations in advance of a new underground railway produced a substantial corpus of post-medieval finds (Baart et al., 1977), and excavations on the Waterloo Square during 1980–1982 provided an opportunity to examine a complete seventeenth- and eighteenth-century residential quarter of the city. Four blocks, comprising about 150 houses, were systematically examined. The resulting finds assemblages—ceramics, glass, leather, textiles, metalware, wood, bone, and paleobotanical finds—provided a laboratory for the study of Dutch material consumption and dietary habit during the Dutch Golden Age (Baart, 1983, 1997).

Across the border in Flanders, several decades of intensive excavation in Antwerp have revealed something of the material wealth of what was one of northern Europe's finest Renaissance cities (Antwerp, 1983; Veeckman, 1992, 1996). Integral to the history of Antwerp's and commercial and cultural development during the sixteenth century is the archaeology of the migration and establishment in the city of two Mediterranean Renaissance technologies, namely the maiolica and glass industries originating from central Italy and Venice, respectively (see Veeckman [1997] for maiolica; Denissen [1983] for glass; and Veeckman [2002] for a fuller survey). The post-medieval wealth of Flanders as a whole can also now be observed in the rich ceramic and glass assemblages excavated in Bruges (e.g., Hillewaert et al., 1991), Brussels (De Poorter, 1995), Antwerp (Veeckman, 1992, 1996), and Masseik (Heymans, 1989).

Finally, in Central Europe, while medieval archaeology is a relatively new development, post-medieval archaeology is still very much in its infancy and, as elsewhere, a product of the redevelopment of urban centers following the collapse of the Iron Curtain. Although essentially rescue-led, in their summary of developments in Prague and other Bohemian towns, Smetánka and Žegklitz (1990) identified the growth of a definable post-medieval

archaeology in the region with a particular focus on mass-produced material such as ceramics. For Hungary, Imre Holl included a discussion of the Turkish occupation in his recent survey of Budapest's urban archaeology (Holl, 1991). Here King Martinus Corvinus's late-fifteenth- to early-sixteenth-century Renaissance palace of Buda has long been a focus of archaeological interest (Farbaky, 1991). Meanwhile Vienna's archaeologists have concentrated on the city's rich medieval to early modern ceramic inventory as an index of commercial and cultural contact around the Empire and beyond (Harl, 1982).

Material Culture Studies

Of all the social and economic spheres that make up post-medieval European cultural history, it is in the study of the household—its utensils, physical environment, and behavior patterns (in other words, its Alltagskultur)—that archaeology has made by far the greatest impact over the past 25 years, particularly with the growth of urban rescue excavations (Falk, 1992). For the first time, city artifact deposits have provided a physical key to significant economic and social developments of the period, including the growing commercial and cultural influence of the urban mercantile community and their increasing access to global markets. By virtue of its utility at most levels of post-medieval European society, its relatively short lifespan, and its durability in the ground, ceramics have proved to be one of the most sensitive and reliable sources of economic trends and social behavior. As in Britain during the 1960s, the study of ceramics has been the catalyst for the emergence of post-medieval archaeology as a definable discipline in Europe (see Gaimster [1994a] for Britain). Equally, the study of ceramic- and glass-manufacturing sites has generated a vast corpus of information on technological innovation and developments in the modes of production. Well-sourced artifacts are a necessary prerequisite for examining questions of interregional trade and cultural exchange (e.g., Gaimster [1997a:51–114, 1999a, 1999b, 1999c] for the study of the Baltic ceramic market ca. 1200–1600). Thus, in recent years, we have seen an explosion in the study of artifact distributions and in scientific characterization programs, particularly of ceramics (e.g., Hook, 1997; Hook and Gaimster, 1995; Hughes and Gaimster, 1999).

In the northern European post-medieval ceramic sphere, most attention has been paid over the past two decades to products such as slipware, stoneware, and stove tiles, which were transformed technologically and visually under pressure from an increasingly sophisticated ceramic market and which consequently offer enormous potential for consumer studies. Equally, the Mediterranean tin-glazed earthenware (maiolica) industries, which migrated across the Continent in search of new markets during the sixteenth century and which transformed indigenous pottery-making traditions, are now the subject of detailed scrutiny (Gaimster, 1999d; Veeckman, 2002). In addition to urban excavation monographs that contain catalogs of pottery and other artifacts (see above for selection), several important synthetic studies of post-medieval ceramic production, consumption, and distribution have appeared over the past two decades (Gaimster [1992], Naumann [1988], Stephan [1992], and Verhaeghe [1988] provide major regional overviews).

The slip-decorated earthenware industries of Central and northern Europe have been the focus of a special study by the German archaeologist Hans-Georg Stephan. Stephan's 1987 study charts the spread of polychrome-painted lead-glazed earthenware across the Continent from the early sixteenth to mid-seventeenth century and provides a measure of the spread of Renaissance table culture among the middle-ranking to lower levels of society (see Gaimster [1989] for review). His long-term examination of slipware-production sites along the Upper Weser and Lower Werra Rivers is a model of an archaeological approach to a field of study traditionally dominated by decorative arts historians (Stephan, 1981, 1983, 1992). Excavations in the consumer towns of the region have also indicated the extent to which these products penetrated the local ceramic markets and performed in competition against imported wares (Stephan, 1980b, 1980c).

Equally influential in the development of northwest European earthenware studies has been the work of John G. Hurst, the British archaeologist and ceramic researcher (see below). His analysis of the North Holland slipware industry of the

late-sixteenth to mid-seventeenth century provides an important geographical extension to Stephan's work (Hurst and van Beuningen, 1975). The intensive level of archaeological interest in the Low Countries earthenware industries is further exemplified by Anton Bruijn's special study of the Werra slipware kiln that moved to Enkhuizen during the first decade of the seventeenth century (Bruijn, 1992), Gerrit Groeneweg's examination of redware and maiolica production in Bergen op Zoom (Groeneweg, 1992), and Peter Bitter's excavations of the Alkmaar redware kilns (Bitter, 1996:93–113). Local earthenware production is proving to be one of the most active areas of post-medieval excavation activity in the neighboring regions of Flanders (Verhaeghe, 1988) and northeastern France (see various papers in Blieck [1989]).

Perhaps one of the liveliest areas for slipware research in recent years has been the Lower Rhineland, the location for an extensive network of rural workshops supplying both the region and the neighboring Low Countries and beyond into the North Sea between the late sixteenth and eighteenth century. A number of major exhibition handbooks and conference proceedings have provided an overview of the field, which is characterized by a multidisciplinary approach combining archaeological, art-historical, documentary, and ethnographic evidence (Burhenne et al., 1991; Gaimster et al., 1988; Naumann, 1988; Tromnau and Krause, 1986). Excavated materials from production sites provide key information in this field (e.g., Frankewitz, 1992; Mars, 1991). The study of these industries and their role in the regional pottery market has been transformed by the results of over a decade's intensive excavation in the city of Duisburg on the confluence of the Rhine and the Ruhr (see Krause [1992] above). Over 50 sealed contexts covering the period ca. 1400–1800 have provided a detailed picture of the changes in regional pottery supply and demand across sites of different status and between town and country (Gaimster, 1986, 1988, 1991, 1992, 1994b, 2006). The project conducted by the author on the post-medieval ceramic sequence of Duisburg and its hinterland was designed to span the divides separating the post-Middle Ages from the earlier medieval and subsequent industrial periods, thereby enabling a long-term picture to emerge of continuity, change, and competition in the local pottery market. Parallel to developments in northwest Germany and the Low Countries, an archaeology of local post-medieval earthenware production is also developing in southern Scandinavia and in Poland, a field traditionally the preserve of ethnographers (e.g., Galt [1981] and Broberg [1982] for Stockholm; Augustsson [1985] for Halmstad; Billberg [1989] for Malmö; Blohmé [1995] for Kalmar; and Buko and Pela [1997] for a collection of Polish studies).

Meanwhile, a far greater understanding is beginning to emerge regarding the genesis of the northern European tin-glazed earthenware industry. Maiolica was revolutionary in both its technology and its social impact, and represents, along with colored glass in the Venetian style, the spread of Italian Renaissance know-how and domestic fashion to the north. Pivotal to the study is the new archaeological and documentary research being conducted on the maiolica workshop established in 1476 by Italian artisans under King Matthias at the royal palace of Buda in Budapest and the subsequent migration of central Italian maiolica potters to Antwerp and Flanders during the early years of the sixteenth century (Bertalan, 1991; Dumortier, 1988; Veeckman, 1997, 2002). Jan Baart's work on Italian and Portuguese tin-glaze earthenware imports into Amsterdam form templates for the growth in demand for Mediterranean-style tablewares along the North Sea littoral during the sixteenth and seventeenth centuries (Baart, 1986b, 1987). Recent research by Falk and Gaimster (2002) has stressed the role of imported Mediterranean and Low Countries maiolica in the transformation of dining culture in the Baltic during the sixteenth century. The establishment of a tin-glazed earthenware industry around the Low Countries and across the English Channel during the course of the sixteenth century is the subject of an edited volume published by the British Museum (Gaimster, 1999d). For the seventeenth and eighteenth centuries, excavations on manufacturing and consumer sites in the Low Countries, the Rhineland, and the Baltic region have transformed our knowledge of technological developments in the industry and of the continuing demand for the tin-glazed earthenware in the north before the impact of industrially mass-produced wares in the later eighteenth century (see Bischoff and Döry [1984] for Frankfurt-am-

Main; Eriksson [1991] for Sölvesborg, South Sweden; and Schulz-Berlekamp [1992] for the distribution of Stralsund wares).

But of all the European ceramic industries of the late medieval to early modern period, one in particular made a profound global impact. Stoneware made in the Rhineland, Lower Saxony, and Saxony is characterized by an extremely robust body that is also stain and odor-free, completely impervious to water, and ideal for drinking, decanting, storage, and transportation purposes. Its physical and artistic attributes enabled the German stoneware industries to dominate the regional ceramic markets of northern Europe between the early fourteenth and mid-eighteenth century and to penetrate the European colonial trade from the late sixteenth century onward. The introduction of molded relief ornament based directly on contemporary print sources during the early sixteenth century transformed the medium from primarily utilitarian in character to a fashion item in its own right. Stoneware in context, therefore, offers archaeologists the opportunity to examine questions of commercial contact and sociocultural development.

The archaeology of German stoneware has been the subject of a detailed study by the author (Gaimster, 1997a) that summarizes over a century of excavation on production sites and the evidence for its distribution around Europe and the New World. With its ubiquitous distribution, shared only with clay pipes, German stoneware has become one of the principal "type fossils" of European post-medieval archaeology. German stoneware is central to all the most recent archaeological studies of commercial and cultural contact in the North Sea and Baltic trading zones between the fourteenth and seventeenth century (e.g., Hurst et al., 1986; Gaimster, 1997a:78–97, 1999a, 1999b, 1999c, 2005; Reed, 1990; Sveinbjarnardóttir, 1996) (Fig. 2). The product was also in widespread demand as a ceramic utensil and transportation container on voyages around Europe and to the New World, as the global shipwreck distribution demonstrates (Gaimster, 1997b, 2000b). State and civic archaeological authorities in Germany have recognized the international cultural importance of their early modern stoneware industries and are now taking a more responsible attitude to the conservation and research of key production sites. Recent excavations at Siegburg and Frechen in the Rhineland and at Grossalmerode in North Hesse are models of this development (e.g., Jürgens et al., 1995; Korte-Börger, 1991; Stephan, 1986).

As with so many categories of European post-medieval ceramics, ceramic stoves represent a category of material culture that have traditionally been the preserve of decorative arts historians and ethnographers but which are now the focus of considerable attention by post-medieval archaeologists working in northern and Central Europe. Besides a radical innovation in domestic heating technology during the late medieval period, the smokeless ceramic stove, with its relief-molded and glazed tiles, injected a new visual dimension into the household interior of aristocratic residences, monasteries, and town merchant houses alike. Like stoneware, the use of contemporary printed designs (portraits, allegorical subjects, etc.) transformed tile stoves during the sixteenth century into a medium for cultural and political exchange (Gaimster, 2000a). The study of post-medieval stove tiles and their molded designs from archaeological contexts is developing rapidly with the realization that excavated assemblages provide a basis for the study of the material wealth, spatial arrangements, and the living conditions of individual households. Stove-tile research has formed one of the principal fields of post-medieval archaeology in Central, northern, and Baltic Europe since the 1930s (Blomqvist, 1936; Gaimster, 1995). Major archaeological studies published recently include those by Unger and Gaimster (1988) for the Rhineland (Cologne); Stephan (1991, 1992) for the Werra and Weser Rivers; Ring (1996) for Lüneburg; Kuncevičius (1992) for Lithuania; Ose (1996) for Latvia; Vunk (1996) and Russow (2006) for Estonia; Kilarska and Kilarski (1991, 1993) for the Baltic coast of Poland; Brych et al. (1990) for Prague; Roth Heege (2001) for Switzerland; Richard and Schwien (2000) for France; and Gaimster (1999c, 2001a) for the Baltic rim.

Of the other principal classes of material culture, the study of the manufacturing and use of post-medieval vessel glass has been transformed by archaeological discoveries, particularly in towns. Extensive urban sequences have been published, among others, from Amsterdam (Baart et al., 1984), Deventer (Clevis and Kottman, 1989), and Alkmaar (Bitter, 1996) in the Netherlands; Antwerp

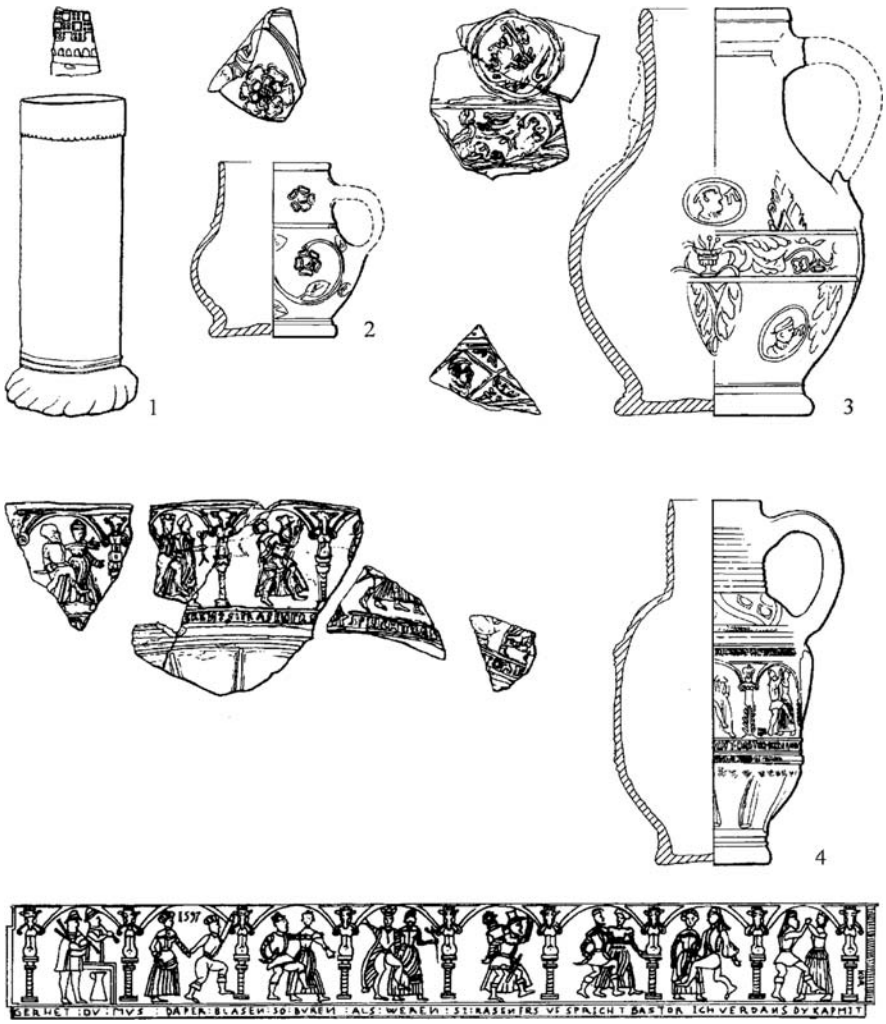

Fig. 2 Selection of imported German stoneware ceramics excavated at the Danish royal castle of Lindholmen, Scania (Sweden): **1,** Saxony, ca. 1475; **2,** Cologne, ca. 1550; **3,** Frechen, ca. 1550–1575; **4,** Raeren, ca. 1597–1600 (from Gaimster and Stilje, 1995:Fig. 4, and Gaimster, 2001b:Fig. 7)

(Denissen, 1983); Lübeck (Dumitrache, 1990); Elbląg, Toruñ, Szczecin, and Kołobrzeg, Hanseatic towns on the Polish Baltic coast (Gołębiewski, 1993); Höxter in Westphalia (Stephan, 1980b); Göttingen (Korbel, 1983) in Lower Saxony; and Nymburk, Bohemia (Sedláčková, 1997). Meanwhile, post-medieval rural forest glass industries have come to the attention of archaeologists. The study by Wamser (1984) of Spessart glass in Franconia and that by Wichert-Pollmann (1984) of the workshops in the eastern Westphalia/Lippe region exemplify the trend. In Scandinavia and the Baltic, the excavation of early forest glass sites bridges the subject and methodological divide between post-medieval and industrial archaeology (Matiskainen and Haggrén, 1995; Matiskainen et al., 1991; Roosma, 1966). The survey by Henkes (1994) of vessel–glass production and use in the Netherlands during the late medieval to early modern period is a model of the more recently published synthetic reports. Equally, clay pipes are now being studied on both the regional and local level, and several major corpora are now in print (e.g., for regional European surveys see Davey [1980, 1981]; see also Kügler [1987] for the German Westerwald; Mikłaszewicz [1995] for Toruñ, Poland; Buchholz [1992] for Wismar, Mecklenburg; and Stephan [1994] for Höxter). Annual meetings of the German Clay Pipe Research Group are attended by researchers from neighboring countries and beyond (Kügler, 1996).

Because of the prolific nature of Continental urban archaeology, this survey has restricted itself in the main to the study of urban artifact sequences and consumption by mercantile and artisan populations. However, it cannot draw to a conclusion without mentioning one or two other rich sources of material culture, particularly those that relate to elite (royal, aristocratic, or ecclesiastical) culture and rural (peasant) communities. Examples of substantial post-medieval ceramics and glass collections recovered from patrician sites in northern Europe include those from Burg Gleichen, Thüringia (Lappe, 1983); Fürstenberg on the Weser (Stephan, 1982); Heidelberg Castle (Lutz et al., 1992), Johannisburg Castle, Aschaffenburg (Ermischer, 1996), and the cathedral precincts at Hildesheim (Kruse, 1990) in Germany; the castles of Kessel and Tilburg in the Netherlands (Clevis and Thijssen, 1989; Stoepker, 1986); the royal Danish castle of Lindholmen, southern Sweden (see Fig. 2) (Gaimster and Stilje, 1995); and from castles in Mecklenburg, northern Germany (Schoknecht, 1999). Each assemblage is characterized by abnormally high levels of imported high-status wares. Many of these sites have produced luxury artifacts worthy of special study in the context of investigating court lifestyle and leisure activities (e.g., Streitwolf [1993] on the wooden bat from the court ballgame found in the vicinity of the Palatine court buildings at Heidelburg, or Fritsch [1989] on the ornate stove tiles excavated at Schloss Brake, Westphalia-Lippe).

Regional studies include Gaimster's (2001b) survey of material life and lifestyle in the Baltic castle up to ca. 1600. In contrast, relatively little excavation has been carried out on rural village sites, farms, or manor houses over the past 25 years. Important exceptions illustrating the relative levels of consumption in the countryside include the village of Weidemoor outside Rostock in Mecklenburg, deserted around 1625 (Schäfer, 1996), and the farmhouse of Haus Gelinde in the Lower Rhineland, which was occupied during the eighteenth and early nineteenth centuries and produced vast assemblages of local and imported (industrial) ceramics (Hackspiel, 1993). Even in Scandinavia, today still an essentially agricultural landscape, archaeologists have only recently turned their attention to rural communities. The multidisciplinary study of a manor house complex at Perniö on the Baltic coast of Finland represents the beginning of a new trend in the region (Niukkanen, 1997; Haggrén et al., 1998). Christina Rosén's (1995) study of redwares on town and country sites in the western Swedish province of Halland represents a rare survey of rural ceramic consumption between the sixteenth and nineteenth century.

An Embarrassment of Riches?

This survey of recent trends in post-medieval archaeology in northern and Central Europe has been both geographically and thematically selective. In concentrating on the growth in urban rescue archaeology and the proliferation of artifact studies, I have been unable to discuss other equally important fields of European post-medieval archaeology that are coincidentally well developed in British or North American studies. Here I include the archaeology of post-medieval standing buildings and housing, the food supply and environmental conditions, cemetery sites and burial practices, religious practice and belief, fortifications, the various extraction and mechanical power industries, shipwrecks, and the archaeology of leisure. However, the exercise has at least demonstrated some of the main developments and areas of activity for northern Europe in what is clearly, through the demands of urban redevelopment, a growing practitioner field. Viewing the situation impartially (and from the other side of the English Channel), it would be accurate to say that post-medieval archaeology on the Continent and in Scandinavia is still very much in the developmental stage and conducted at an essentially normative level. As with all new fields of study, its ambitions to date have been rooted in the primary tasks of subject definition, classification, and description. Meanwhile, its principal challenge has been to find both an intellectual and a methodological solution to the diversity and profligacy of physical evidence and historical source materials that so define the epoch. Despite its comparative youth, post-medieval archaeology in northern and Central Europe has already generated a "finds mountain," or "embarrassment of riches," which is far more daunting than in any other period or cultural field.

Despite these challenges, there are signs that practitioners and researchers are rapidly moving away from their former "supplemental" role and are becoming increasingly aware of the potential of the post-medieval material record as a primary historical source in its own right. If not period-specific, post-medieval archaeology is developing into an identifiably multidisciplinary subject that can form a bridge between economic and cultural history. European post-medieval archaeology is defining itself methodologically through its exploitation of diverse material, historical, and scientific sources of evidence. Increasingly, research projects are beginning to employ a combination of archaeological, ethnographic, iconographic, documentary, and environmental or material science approaches to artifacts, buildings, or landscapes (Boockmann et al., 1980; Smetánka and Žegklitz, 1990). This development is particularly visible in German-speaking countries where research programs are examining the methodological issues of multi- and interdisciplinary collaboration. In Lübeck, archaeologists and historians working on the social topography of the city have identified some of the problems of linking documentary records for residential occupation with the actual archaeological context (Falk, 1987; Falk and Hammel, 1987). Meanwhile, researchers at the Institute for Material Culture in Krems, Austria (see above), have developed a computerized iconographical database. The recorded images provide a visual functional and social context for domestic archaeological artifacts of the fifteenth and sixteenth centuries (see above, and also Hundsbichler [1982], Kühnel [1992], and various papers in Jaritz [1996]). The initiative has inspired archaeologists working in other parts of Europe, including myself, to examine pictorial sources as a means of reuniting object with context (Gaimster, 1997a:115–141, 1997c). The Krems Institute has taken on a special role to establish a methodological and intellectual framework for interdisciplinary research in archaeology, iconology, and documentary study of early modern European society (e.g., Hundsbichler, 1992, 1996, 1997). In northern Germany, institutes of ethnography have also invited archaeologists to contribute to broad thematic conferences dealing with major ethnohistorical issues such as Hanseatic dietary habit and dining practice (e.g., Stephan, 1996).

Excavated and curated material evidence is beginning to make a more telling contribution to the wider historical narrative on the continent of Europe, particularly in the reconstruction of the past lifeways of a much broader spectrum of society than those groups that tend to dominate the documentary record. Let us hope that this trend continues over the next decade and that archaeology can develop strategies to more effectively exploit this vast resource. By doing so, European archaeologists will also be able to contribute a longer-term historical perspective for the settlement of their ancestors in the New World.

Postscript Since completing this chapter in 2006, the German Society for Medieval and Post-Medieval Archaeology has published a first volume of 22 chapters dedicated to the archaeology of the post-Middle Ages in German-speaking Europe (Paderborn, 2007).

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The Development of Post-Medieval Archaeology in Britain: A Historical Perspective

Geoff Egan

Introduction

The post-medieval period was long regarded in Britain as something of a Cinderella of the archaeological world. However, as we approach the end of the first decade of the new millennium, it has become as routine a part of most generalist field practitioners' work as any other. The study of the archaeology of the latest period was previously regarded as optional, often being undertaken or not depending simply on the enthusiasm or lack of it on the part of the archaeologists in the particular area. The founding of the Society for Post-Medieval Archaeology (SPMA) in 1966 is an obvious watershed in the British national recognition of the subject. With the support of other specialists, SPMA developed from a relatively small organization, the Post-Medieval Ceramic Research Group, which was founded 3 years previously and whose main interest was specifically pottery (Anonymous, 1967; Barton, 1967). There were some initial concerns by members that the subject would not produce enough high-quality data year by year to sustain an annual journal, but the first issue of *Post-Medieval Archaeology* was duly published in 1967, and 2008 saw the journal's forty-second volume. Focusing on evidence for production in the period ca. 1750–1950, the Association for Industrial Archaeology was founded in 1973, with the first issue of its journal, *The Industrial Archaeology Review,* coming out in 1976. The overlaps between, or sometimes uniting, "post-medieval" and "industrial" archaeologies have been much discussed, but any boundaries remain debatable, and this question intermittently resurfaces.

The appearance also in the 1970s of county-based and urban archaeological units across most of England and Wales, with less full coverage for Wales and Northern Ireland, took the majority of archaeological field investigations out of the hands of museums, where an appreciation of the value of investigating the post-medieval period, at least through its material culture, had been developing for some time among curators and other staff (e.g., Celoria, 1966; Noël Hume, 1955, 1956, 1962; Oswald, 1960; Oswald and Philips, 1949). The advent of the units, whose field staff were recruited mainly from recent graduates, arguably brought a temporary delay to the development of post-medieval archaeology, which was then outside the experience of most university-educated practitioners. For example, the most significant post-medieval site excavated in the central area of London in the 1970s was only investigated by the fluke interest of the 18-year-old supervisor (working immediately after having left school) at a location where the intention was simply to excavate a Roman cemetery. In the event, the post-medieval deposits proved very interesting to the excavation team, and these were the only ones examined in detail (the site was published as Thompson et al. [1984]).

Despite the launching in the past decade of a number of undergraduate courses specifically dealing with the post-medieval period, there is still a significant gulf in trained expertise for fieldwork as the earlier generation works toward retirement. An acute lack was reported by O'Sullivan (1999) a

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decade ago, but the situation has improved steadily since then. One can anticipate that for the next practitioners this should no longer be a widespread problem.

The publication in 1990 of David Crossley's innovative book—*Post-Medieval Archaeology in Britain*—concentrating on the period ca. 1500 to the beginning of "industrialization" in the mid- to late eighteenth century was another major milestone. The pace of development of the subject meant that it was followed by a second "handbook" just over a decade later—*The Historical Archaeology of Britain, c1540–1900*—the writers of which took ca. 1900 as their end date and featured evidence particularly from the north and west, while somewhat playing down the discussion of finds, as a balance to Crossley's emphases (Newman et al., 2001). In response to Crossley's focus on production sites, David Gaimster attempted the first overview of material consumption in southern Britain ca. 1450–1750 (Gaimster, 1994).

One characteristic of a mature subject is that it generates a variety of viewpoints. From the mid-1990s, following a long gestation period when there was almost no significant diversity of opinion save in details of interpretation of small points relating to individual projects or finds, this has become a healthy feature of the archaeology of the latest period. Most notable among the recent fresh approaches are those of Matthew Johnson and his following of university-based researchers (who are unrestricted by the need to work to the agenda of local-authority planning departments or central government directives) and for many of whom theory is of central importance (e.g., Johnson, 1996, 1999a; Tarlow and West, 1999).

A view that "industrial archaeology" can be defined as a separate chronological period within the discipline has recently been promoted as some practitioners have developed an interest in the living conditions and other social aspects relating to the workforce, as well as broader environmental and landscape studies (e.g., Gwyn and Palmer, 2005; Palmer and Neaverson, 1998; also see Martin, this volume). The terminology used to refer to the latest period and its precise duration continues to provide a subject for debate, with a wide range of possibilities now devised for both aspects. Again, the stimulating discussion engendered by this debate is surely to be welcomed. This is surely a much better situation than when the main focus of contention for the subject was simply whether or not the post-medieval evidence at any given site did or did not merit any investigation.

From Limited Beginnings: A Main Focus on Artifacts

This chapter inevitably draws heavily on the author's background working in the archaeology of London for over 30 years. It can be claimed, with some justification, that the post-medieval archaeology of the capital has been and more arguably continues to be central to several of the developments within the artifact study and fieldwork sides of subject, though there are of course many highly significant developments elsewhere in the United Kingdom that have little or nothing to do with the metropolitan area. As a colleague from the United States recently remarked to me, "You have far too many objects here"—and for all the rights and wrongs that others may perceive in this, it is why several London practitioners have tended to concentrate on this aspect.

Although it was exceptional until the middle of the twentieth century for any formal fieldwork to be undertaken at a professional level on deposits from the post-medieval era, this does not mean that archaeological attention of a kind was previously absent. Some early reports of early modern discoveries now considered significant were put on record almost anecdotally (e.g., the find of a seventeenth-century toy gun noted in a diary of 1799 [Lindsay, 1970:13]).

The first book entirely devoted to a post-medieval archaeological subject (apparently by a factor of almost 40 years) is a 1928 report written by Mortimer Wheeler on a large hoard of late-sixteenth- to early-seventeenth-century jewelry found in central London in 1912 (London Museum, 1928)—an eyeful and more of treasure in the popular sense. Interestingly, most pieces have not since been paralleled among finds anywhere, because they are from a social level that is neither sufficiently elevated to survive in

aristocratic and institutional collections above ground, but with real stones (though neither large nor of the best quality) set in precious metal, they are of significantly higher status than the few gold or silver items that are recovered from the ground tend to be.

As suggested in the introductory section, the earliest sustained, serious attention to post-medieval material from the ground came from ceramic historians' and collectors' enthusiasm for their subject rather than from a developed archaeological perspective. The site of the Chelsea porcelain factory, for example, was searched for evidence of wasters and industrial material within a century of its closure (Toppin, 1931). This was followed as occasional redevelopments allowed on several other known pottery-manufacturing sites. In 1946, the distinguished ceramics researcher, Garner (also from an art-historical background), mapped pottery factory locations for future investigation in London—in effect the earliest field strategy document for any aspect of the capital's archaeology of any period, and probably the first for any aspect of the post-medieval period in Britain (Garner, 1946).

It took a relatively long time (and some lobbying from the SPMA) for an archaeological post to be established for the City of Stoke-on-Trent in the British Midlands, which would be bound to have seventeenth-century and later ceramic production sites as an obvious priority for field investigation. This was achieved with a permanent archaeological post in the mid-1990s, following a period with a series of end-to-end contracts for separate undertakings. Previously, fieldwork had been carried out by the curatorial staff of the local museum, or by bringing in a team from the British Museum in London (see Cherry and Tait, 1980; Tait and Cherry, 1978). By the mid-1990s, however, an integrated archaeology service has come into being, combining curatorial and contracting roles, responding to all threats to Stoke-on-Trent's archaeology and influencing local development plans. At the time of this writing, there have been staff changes and restructuring, but the now-separate curatorial and contracting roles are firmly embedded within the City Council's establishment.

The archaeological volume on the potter William Greatbatch brought home the complexity of his production of a variety of wares at a single, small, eighteenth-century factory in Fenton, Stoke-on-Trent, as established from stratified waste dumps (Barker, 1991; for a broader synthesis of some of the work in the Potteries District, see Barker and Cole [1998]). Similar studies might be produced on several other producers in the same area and elsewhere (see, for example, Coleman Smith and Pearson, 1988).

Two publications deal with evidence for the Limehouse porcelain factory in London's Dockland, investigated in the late 1980s (Drakard, 1993; Tyler and Stephenson, 2000). The first—a high-quality, hardback publication—was paid for by the ceramics trade, who were keen to see new field evidence, which would for the first time definitively identify the products of this short-lived factory, set out as soon as possible. It is impressive just how quickly new publications in the extensive collectors' literature on porcelain assimilated the results presented. The second much more detailed publication undertaken as part of a general archaeological post-excavation program is a more considered if less-lavish product in cardboard covers, which provides a more thoroughly digested view of the field evidence. It is remarkable that the key archaeological feature, the kiln, is located in different (adjoining) properties in the two publications, though this point appears not to be made explicit. This is a vital feature in archaeological terms, but nonarchaeologists might not necessarily be as worried by such a detail. It has been estimated that the few items of Limehouse ware that were provisionally identified before the excavation and in the event vindicated by it (most of them held by one of the main supporters of the first publication, and sold at auction a little while after the fresh information had been assimilated within the trade) commanded a price about 10 times what they would have done without the definitive identification from the fragmentary archaeological parallels found at the site. It may come as a surprise that the sale rooms might have some potential influence over archaeology through their ability to fund projects. The scope for fostering mutual interests is welcome, but as with all such arrangements, it is necessary to look out for any particular pitfalls that might arise from differing agendas.

Ceramics, routinely recovered in quantity at most excavation sites, inevitably continue to be an

important part of post-medieval studies (Fig. 1). The subject has, unsurprisingly, produced more archaeological monographs than any other aspect of post-medieval studies (e.g., Gaimster, 1997; Green, 1999; Pearce, 1992). The nearest thing to a sourcebook, though it only considers evidence up to the mid-seventeenth century, is Hurst et al. (1986). Gaimster and Redknap (1992) is wide ranging, taking a number of specific themes, with ca. 1900 as its end date, and the most recent synthesis is Gaimster (1994). English Heritage recognized a skills gap in the study of post-medieval ceramics, funding training courses for professional archaeologists at Stoke-on-Trent in 1999 and 2001 and subsequently commissioning David Barker to produce a substantial volume, the working title of which is *Staffordshire Ceramics—A Guide to the Identification and Interpretation of Staffordshire and Related Ceramics, c. 1600–c. 1900* (Barker, in press).

Post-medieval glassware was long neglected, with only one significant, major publication (Powell, 1923) during the time the interest in the potential contribution of fieldwork to ceramic studies was developing. This is probably because the

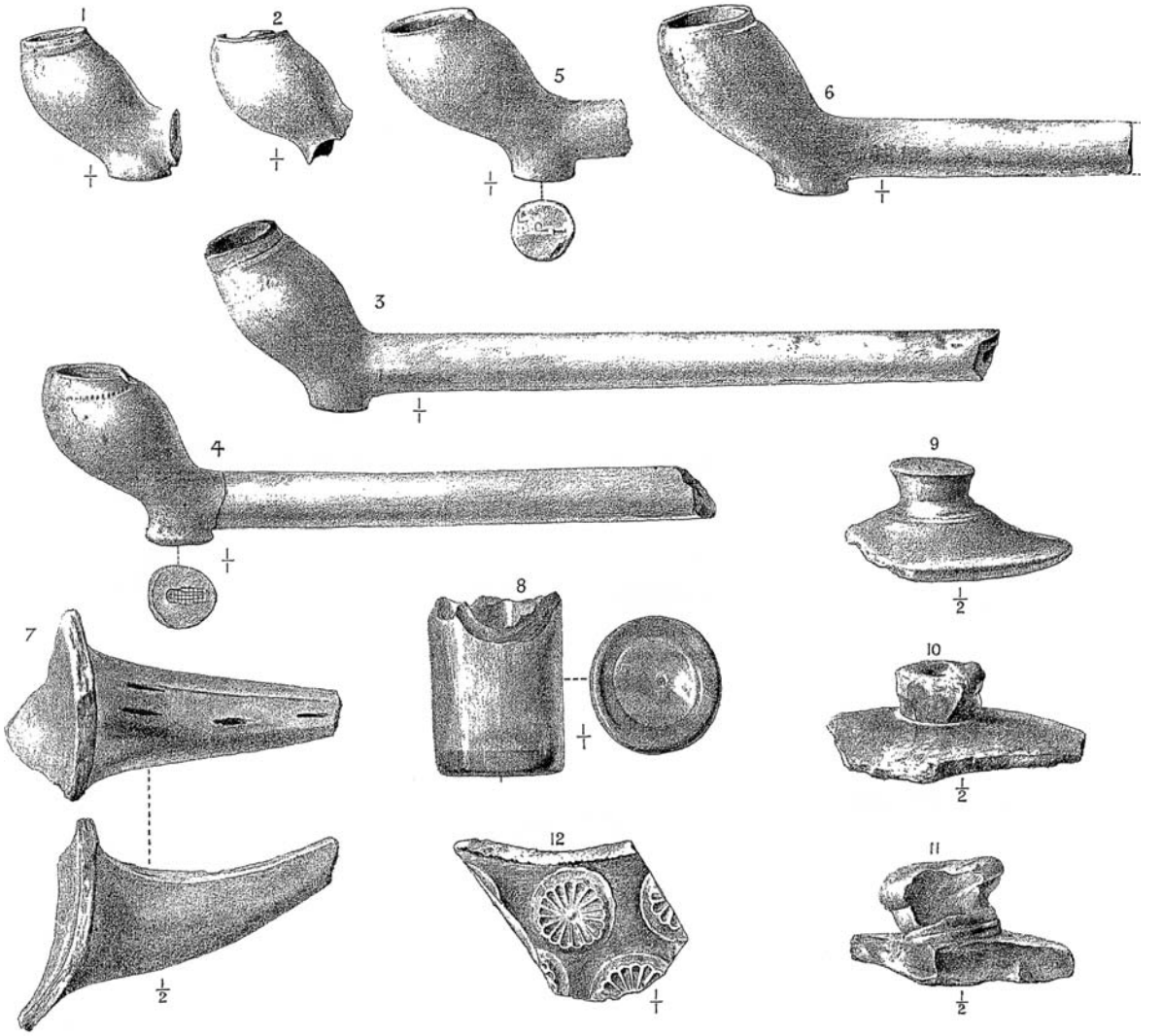

Fig. 1 Ordinary post-medieval finds, but some beautifully engraved, clay tobacco pipes and pottery from King John's Hunting Lodge, Tollard Royal, Wiltshire (from Pitt Rivers, 1890:Plate 17) (not to scale)

collecting fraternity could not get interested in glass waste, and the formulas of most early post-medieval glass meant that the fabric of finished vessels usually decayed in the ground to an unattractive brown opacity with unsightly corrosion or staining. The very translucence that was a major asset for this newly popular medium in its own time meant that even small blemishes were very prominent. To compound this, the inherent fragility of the material ensured that most discarded vessels broke into tiny, dangerously sharp fragments that could not even be glued together so as to hide the breaks. The very few early post-medieval finds that emerged from the ground in a state to appeal to collectors seem not to have been enough to stimulate a ready market.

A find of thousands of seventeenth-century glass drinking vessels in London at the start of the Second World War was given the opportunity only for a summary account to be published in a nonspecialist art magazine (Oswald and Philips, 1949), and so the best chance for the stimulation of publication studies came at a difficult time. As a result of all this, it has taken until after the millennium for a basic sourcebook for this staple category of archaeological finds to emerge for the period. Godfrey's (1978) very competent documentary history served to fill the gap until Willmott (2002) provided a specifically archaeological treatment. The scientific interest in the development of glass furnaces meanwhile became a thriving aspect of field studies. It featured, for example, in the first volume of *Post-Medieval Archaeology* (Crossley, 1967). The most recent of several syntheses is Willmott's (2005) *A History of English Glassmaking AD 43–1800*.

The third major branch of post-medieval material culture, with an enthusiastic specialist group that sustains a periodic newsletter, is the clay tobacco pipe, arguably the most intensively studied of all artifacts throughout the period (see Fig. 1). With an extensive specialist literature, this field of study has a momentum and an international—indeed worldwide—network all its own (see, for example, Atkinson, 1975; Davey, 1979; Higgins, 1999).

Ivor Noël Hume, who figures at several points in this chapter, began his archaeological career working for the Guildhall Museum, and famously championed fieldwork on post-medieval sites, until, among other reasons, disappointed at the slow progress being made toward a promised publication on post-medieval ceramics, he moved across the Atlantic to continue this line of work in Virginia. His remarkable beacon publication on post-medieval finds of all kinds, *A Guide to Artifacts of Colonial America* (Noël Hume, 1969), which includes as examples many finds unearthed in London, significantly remains in print as a place of first resort for both European and American students more than 35 years after its first appearance, especially for material culture dating prior to ca. 1850. More than a generation after its first publication, it has no rival in single covers as a general guide to one of the main aspects of the archaeology of the British and their colonial empire. No subsequent publication has matched the range of material covered at a basic level with comparable authority.

Progress has inevitably been made, though slowly, on specific themes within the vast range of metalwork. Dress accessories have surprisingly not received a full consideration, and the literature is very scattered (e.g., Egan and Forsyth, 1997; Egan [2005a] includes a range of early post-medieval accessories). Ushering in the previously neglected archaeology of childhood, early toys (Figs. 2 and 3) have also received detailed attention from an archaeological perspective (Egan, 1996; Forsyth with Egan, 2005). Spoons of pewter and brass, illustrated mainly by excavated specimens from the sixteenth and seventeenth centuries, were the subject of an early study (Hilton Price, 1908), which has now been superseded (Homer, 1975). The most recent synthesis of excavated pewterware in general has come from the collectors' ambit (Homer and Shemell, 1983), while a recent monograph on bronze cooking vessels was written about a saleroom collection supplemented by detailed historical research into the foundries and some archaeological evidence, together with scientific analysis of the alloys, producing a valuable synthesis by collating evidence from all sources (Butler and Green, 2003).

For metal artifacts of the eighteenth and nineteenth centuries in general, the fullest guides currently available are written by metal detectorists who have similar research interests to those of archaeologists (see Read, 1995, 2001). The archaeological side has been slow to give much attention to everyday metalwork of this date. The two volumes

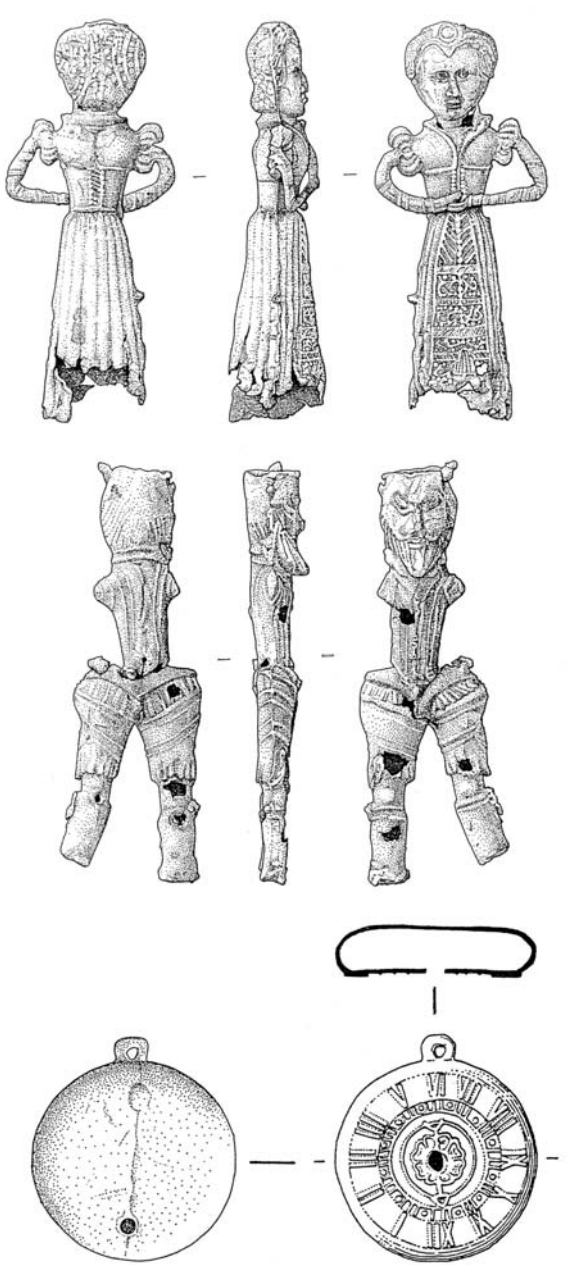

Fig. 2 Late-sixteenth-century hollow-cast, lead/tin Tudor children's toys in the shape of human figures, found in London (drawings by Terry Shiers) (not to scale)

on finds from Winchester are among the few major urban finds monographs to include items from the 1700s and 1800s on the same terms as earlier ones, but the small sample and lack of parallels fully published in similar detail restricted the scope for useful inference (Biddle, 1990). Way ahead of his time (indeed, still to find a follower for his most innovative work in the 1970s) was Francis Celoria. Some of the nineteenth-century material culture he insightfully tackled from an archaeological viewpoint, such as early service fittings in the buildings partially demolished during the redevelopments that gave most other investigators the occasion to concentrate on the underlying deposits from earlier eras, still await further enthusiasts to come forward (Celoria, 1974).

Leather and textiles, less frequently encountered than the preceding materials, inevitably have a more limited but important literature. Leather has been analyzed more frequently than textiles, but the chronological cover is still patchy (see Gardiner, 2005; Nailor, 2005). Analysis of early post-medieval dyes in excavated textiles has produced some surprising results, with colors from lichens as well as the more obvious "industrial" plants (Pritchard, 1992; Walton, 1981, 1987).

The marking of products for quality control is another significant aspect within artifact studies. Clay pipes, pewterware, late-seventeenth-century glass vessels, textiles, and precious metals had different traditions of marking, and these markings occur on many excavated items (Endrei and Egan, 1982; for lead seals on textiles, see Egan [1995]). This byway of artifact research has, despite the massive efforts of documentary historians, produced much new information that would not have come to light without finds from the ground.

The study of production—industrial archaeology in the broad and simplest sense of the term—was an obvious and very important theme right from the first issue of the journal *Post-Medieval Archaeology,* in which the first two papers dealt, respectively, with the manufacture of ceramics and glass (Brears, 1967; Crossley, 1967). Manufacturing sites and other evidence of production processes remain a very significant part of post-medieval studies, as every issue of this journal demonstrates. The detailed charting of trade, primarily through the distribution of ceramics, glass, cloth seals and some categories of metalwork, was another early theme, which continues to develop as an integral part of finds studies. The surprisingly frequent instances where the actual objects supplement or even contradict the wisdom received from the long-studied documentary side are among the

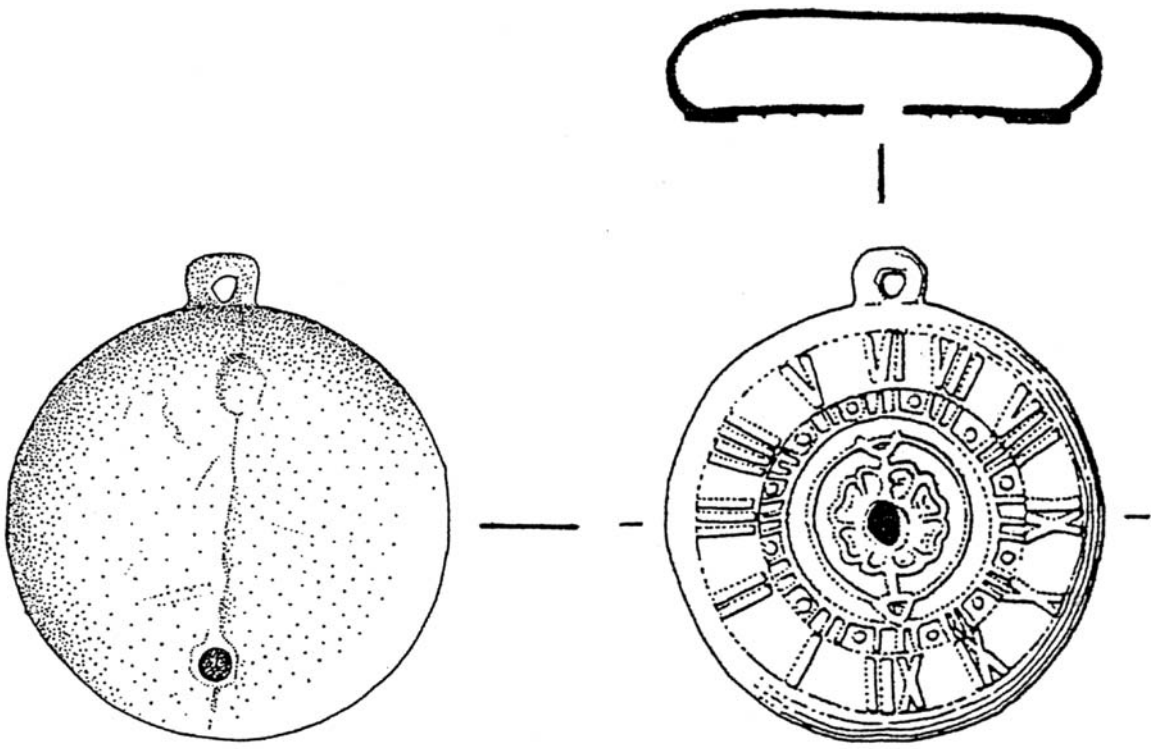

Fig. 3 Late-seventeenth-/early-eighteenth-century stone mold for making pewter toy watches, found in London (drawn 1:1, drawings by Nicholas Griffiths, Museum of London Accession Number A20772)

most useful contributions made by post-medieval archaeology. The study of the ceramic trade of Exeter, for example, in which the origin of a variety of goods was shown to differ from documents that gave only a ship's last port of call, often one or more stops after the one where a cargo was taken on board, is a salutary warning (Allan, 1984). Finds from wrecks are important, often very closely datable assemblages (for a synthesis, see Redknap [1997]). A range of unparalleled evidence from a period generally poorly represented elsewhere comes from the 1545 wreck of the Mary Rose (see papers in Gardiner [2005]).

The study of cargos of merchant vessels has developed as an adjunct to the field of shipwreck archaeology, which is avidly pursued in its own right for the post-medieval period, as for others. Excavations in ports and dockland areas are recognized as providing links between ships, through waterfront installations like wharves, and through exotic goods (Divers, 2004; Douglas, 1999; Killock and Meddens, 2005; Tyler, 2001). Several assemblages of materials from waterfront areas feature not just indications of import/export wares but the first couple of properties inland regularly furnish foreign small change and other "souvenir" items like coral and ethnographic items. The homes of retired sailors within sight of the water may partly explain concentrations here of exotic pottery and other objects that are anomalous when set against more widespread assemblages farther inland.

Buildings, Structures, Landscapes, and Environment

Vernacular buildings have been a continuing theme in post-medieval studies, with the specialist Vernacular Archaeology Group catering specifically for this lobby (see Quiney [1994] for a recent synthesis). As elsewhere, new, wider and theory-based interest

has expanded the scope of these studies in recent years (e.g., Johnson, 1993). Farm buildings have seen relatively little sustained work on post-medieval phases and more is needed across the country to elucidate regional developments (e.g., Cunliffe, 1973). Aristocratic houses and royal palaces have long been the subject of mainstream archaeological research (e.g., Biddle, 2005; Thurley, 1999). This is true, too, of castles and forts, many of which have played significant roles in national history. Since the nineteenth century, the study of early modern fortifications was considered an unarguable extension, along with Tudor defenses (e.g., Biddle et al., 2001) and (English) Civil War works, taking the tradition of studying medieval remains into the later period without any need to consider its validity. Here too the focus of study has moved on (Coad, 1994; Johnson, 1999b). The Civil War in particular has been a focus of the study through archaeology of warfare in the post-medieval period, with investigations of battlefield sites as well as defensive and offensive works (e.g., Ellis, 1993; Mayes and Butler, 1983).

Theaters of the late sixteenth/early seventeenth century (almost exclusively a London phenomenon from the archaeological perspective) have been the subject of some of the most high-profile fieldwork for the entire period (Bowsher, 1998). The excavation of the Rose Theatre from the period of Marlowe and Shakespeare captured the public imagination with the dispute over what was best for the remains. The site had been considered for redevelopment in the 1960s and was then judged too sensitive for that particular project to go ahead. Bad advice seems to have led to the point during the works undertaken in the late 1980s, where I was able to follow daily the unfolding story of on-site protests by leading actors, from a local English-language newspaper, while on holiday in Mainland China. This sorry tale dramatically demonstrated to the public worldwide the folly of not taking sympathetic advice pertaining to the archaeology of some remains of post-medieval date. More positively, the investigation at the Rose and limited fieldwork at the Globe established conclusively the locations of both playhouses (previously a much debated question for each). The new information opened up a range of detailed fresh points of contention about the precise nature and use of the buildings, structures, and spaces available for acting.

Churches and religious houses have been prominent subjects for above- and belowground investigation from the nineteenth century, with their individually evolving structural changes (e.g., Parsons, 1994). Evidence for the Reformation, particularly in the case of religious institutions that were closed down, is a specific theme, with particular attention being paid to the subsequent adaptation of the structures for other purposes (Schofield and Lea, 2005; Thomas et al., 1997). Originally a facet of these investigations, burial studies have become very prominent in recent years. The publication of the investigation of the human burials in the vaults at Spitalfields just outside the City of London was very influential (Molleson and Cox, 1993; Reeve and Adams, 1993), stimulating several similar projects (Brickley and Buteux, 2006). Investigations of burial grounds not associated with religious structures and ones for nonconformists are also routine fare now. More specialized related topics such as gravestones and other memorials are increasingly carried out across Britain (e.g., Mytum, 2006; Tarlow, 1999).

Garden archaeology has been one of the striking growth areas in British archaeology from the 1980s onward (see overviews by Currie [2005], Dix [1999], and Williams [1999]). The nature of the evidence means that larger early modern period horticultural remains have been emphasized to a greater degree in these innovative studies, which are often conducted in the context of the accurate restoration and appropriate replanting of upper-class gardens of a specific period. The study of wider landscapes and the dynamics of large, aristocratic estates is an extension of this kind of work. Landscape studies are fortunately increasing, not least on the part of archaeologists concerned with industrial complexes. Several papers in a recent monograph deal with this aspect (Barker and Cranstone, 2004).

Environmental investigations came late to post-medieval archaeology, and appreciation of their value remains very patchy. A paper published in 1981 on the contents of a London cesspit, which included the environmental evidence (plant remains and animal and fish bones), was at that time an isolated instance among post-medieval studies (Vince and Egan, 1981). In the first issue of *Post-Medieval*

Archaeology, there was an appeal for bones from the period to study, because "Surprisingly little is known about the domestic livestock of this period" (Noddle, 1967). The sustained work of Philip Armitage (based in London and then the United States) through the 1970s and 1980s has shown the way for the present generation's now almost-routine inclusion in appropriate programs of archaeological investigation of early modern period animal-bone studies (Armitage, 1978, 1982). I recall an instance in the early 1980s, when the scope of what became the SPMA's priorities document (SPMA, 1988) was discussed at by the organization's leadership, being greeted with considerable skepticism on the part of several of the then-leading advocates of the early modern period that plant remains merited mention. It was presumed they would have no significant contribution to make to the study of the period. There is now a limited appreciation and inclusion of botanical studies, but environmental studies overall still receive far from satisfactory cover. Until very recently, it is probable that more was published on post-medieval plant material from London than elsewhere in the United Kingdom put together (e.g., Giorgi, 1997, 1999). The reports on environmental evidence and medicinal provision from the wreck of the Mary Rose (1545) may be prominent enough to make the general point that these studies are worth undertaking for the early modern period, when survival allows the right questions to be posed (see Gardiner, 2005).

Growth: Multidisciplinary Approaches, International Views: Tackling Colonialism and Archaeologies of the Eighteenth to Twentieth Century

Gaimster (1994:304–305) has stressed, in the context of material culture, the need for studies that take a multidisciplinary approach. Now that a prolonged period of definition of just what the material culture comprises and of working out dating frameworks for the most frequently encountered post-medieval finds has produced basic parameters (though there is more to be done) the most stimulating advances are being made by combining information from different specialists and viewpoints. Thinking further along these lines, a series of monographs have resulted from conferences held by the SPMA jointly with other special-interest groups in order to tackle broad themes more effectively than from a single point of view. These include collected papers on the Reformation (with the Society for Medieval Archaeology; see Gaimster and Gilchrist, 2003), industrial archaeology (with the Association for Industrial Archaeology; see Barker and Cranstone, 2004), and early modern archaeology in Britain and America (with the U.S.-based Society for Historical Archaeology; see Egan and Michael, 1999). Another recent volume from a different source combines papers on the production of ceramics and glass in Venice, Antwerp, and England, seen from an international perspective, which reflects the movements of the skilled workers who made these products from Italy to northwest Europe (Veeckman et al., 2002). A similar marrying of evidence from two countries, this time across the Atlantic and in the context of production and consumption, underpins an earlier volume on tin-glazed ware (Noël Hume, 1977).

Links between British and North American archaeologists were already strong in the 1960s, as is apparent in the first issue of *Post-Medieval Archaeology,* with a paper from the United States (Noël Hume, 1967) and a Canadian contribution and a note on evidence from Australia in the next issue (Birmingham and Hewitt, 1968; Sutermeister, 1968). The worldview advocated by several commentators (e.g., Orser, 1999) has come to be much more in evidence in the journal of late, with interest in Continental European, as well as African, Caribbean, and Antipodean archaeology, though engagement with Asian evidence has yet to receive similar emphasis. Links with southern Africa, too could be strengthened. In the past decade a surge of interest in colonialism in Africa and in the Caribbean has come to the fore (e.g., Leech, 2008). This interest applies both to the colonies themselves and to the estates in Britain of the colonist landowners, and also to the buildings and infrastructure of the cities, all of which benefited from the wealth these enterprises raised. A new awareness of how slavery in the colonies was central to the funding of many familiar landmarks and much else in London, Bristol, Liverpool, and elsewhere, not least the country houses of successful merchants, has recently appeared, and

this is certain to become an even more prominent theme in future studies (e.g., Dresser, 2001:96–128; Lawrence, 2003). The colonial plantations in Ireland meanwhile continue to provide material for investigation of a somewhat different phenomenon (e.g., Brannon, 1999; Horning, 2006).

It has taken time for the late 1700s and the most recent two centuries to come to be widely considered by archaeologists in the United Kingdom (apart from industrial archaeologists focused closely on production) to provide significant information. Routine fieldwork, with all the considerable efforts involved, has dragged behind college-based researchers. Critics of the development of the archaeological investigation of the past two centuries, when explicit in conversation, tended to use exactly the same accusation as that formerly leveled at later medieval archaeology: at such a late date our subject is the handmaiden of written history, and an expensive way of telling us what we already know. Recent initiatives have made a virtue of selecting a range of nineteenth- and twentieth-century sites, buildings, and other subject matter for study. This trend has been brought still closer to the present by others (Buchli and Lucas, 2001). A major project that will test how readily traditionally collected finds can illuminate particularly communities of the eighteenth and nineteenth centuries is currently underway in London (Jeffries and Hicks, 2004). It is not true, however, that post-medieval archaeology had previously not ventured into the era after 1750 (see e.g., Dawson, 1972; Corbishley, 1976; Emery, 1999; Guilbert, 1975; Webber, 1991). As a former compiler of the annual summary of fieldwork for *Post-Medieval Archaeology* through most of the 1980s, I was only too willing to include such material, but apart from occasional Napoleonic-period fortifications and a few sites investigated because they had been mistakenly identified when fieldwork began as being much earlier, very little was submitted—an accurate reflection of the amount of genuinely archaeological work tackling evidence this late that was then being carried out by those who submitted reports. Investigations of World War II aircraft wrecks, for example, would have been welcomed (and indeed were sought), but the fieldwork considered at that time tended to have been undertaken more with treasure-hunting/souvenir-retrieval motives than in a genuine pursuit of new knowledge. By contrast, more recently the Council for British Archaeology's long-term national project "The Defence of Britain" mapped the survival of thousands of fast-disappearing twentieth-century defenses through the efforts of hundreds of volunteers, and in doing so established the validity not only of the subject but also of mainstream official support for the investigation of field evidence from the 1900s on the grand scale. It is encouraging to see that the archaeology of both World Wars, and the Cold War—including traces left by peace camps, are now being widely taken seriously, with considerable efforts being devoted to recording the field evidence (e.g., de la Bedoyère, 2000; Dennison, 2002; Holyoak and Schofield, 2002; Tuck and Cocroft, 2005).

The Position Reached: Recent Developments and the Future

Periodically, members of the profession produce considered statements of future directions and intentions, which necessarily involve reviewing progress to date. These well-intentioned syntheses are very difficult, if not impossible, to get right, as there are many potential users with a variety of different needs, ranging from purely academic to those who oversee the archaeology of a particular area (who may want just a definitive list of categories of sites, or even a seriated list of named ones in their area, that are considered worth excavating/investigating or preserving, to back up their daily need to justify work under their purview). In 1988, SPMA published *Priorities in Post-Medieval Archaeology,* a document with national scope. It was made clear in this document that there was no simple league table of desiderata that could be listed in order of general "need" or academic urge to investigate—the reality is a much more complex requirement to assign resources available to cater locally as needs arise, perhaps within a previously defined category, but in reality often presenting fresh, previously unspecified aspects that may sometimes be of unarguable significance to the development of the subject. The society is currently producing an updated, more thematic but much briefer statement of broad desiderata, as the current fashion is, but progress on

this in the era when almost every full-time archaeologist in Britain is greatly overworked by the day job alone, such an additional task is extremely difficult to orchestrate. A series of regional archaeological reviews are currently in the process of preparation across England. The first of these to appear was that for London (Nixon et al., 2002). It looks as if these documents are going to be extremely varied in their coverage of the latest period, depending on who has contributed to them. Some have had post-medieval archaeology or aspects of it inserted only during the final consultation period, while in others this was included from the start. It has been alarming to see the scale of some omissions, at least before the consultation stage. It still seems to hold true that post-medieval archaeology is given due consideration among senior practitioners largely through the enthusiasm of some individuals, rather than being seen more widely as a routine part of the subject as a whole, despite its prominence now in the working lives of most generalist practitioners in the field. These documents are undoubtedly together going to include some of the most advanced ideas about post-medieval archaeology, so a review publication drawing together all their relevant parts into one place would be most interesting.

Going beyond the limited archaeological community, the results of a major consultation exercise initiated by English Heritage in a project about attitudes to heritage were published at the millennium (Department for Culture, Media and Sport [DCMS], 2000). It is in many ways encouraging for post-medieval archaeology that this revealed the built environment of the recent centuries to be the most prized aspect of people's everyday appreciation of their past. On the other hand, it also showed up that for the majority of those in Black and Asian communities little if any connection was felt with this surrounding heritage, to the point for a significant number of taxpayers of a perception of exclusion from it. This highlights one of the most significant challenges for the future of the archaeology of the recent past, and one which is only beginning to be tackled.

A noticeable trend over the past 30 years has been the slow diminishing of the contribution that has been made by the "amateur" sector as a whole, while the "professionals" have steadily taken on more of the subject matter. In the United Kingdom, the government currently places great emphasis on the voluntary sector and the provision of broad "access" for everyone to follow a wide range of activities. Archaeology has not been slow to draw several strands together, with the appointment of "community" archaeologists whose duties include involving the local populace (not least the children and metal detectorists) in practical undertakings to foster study of the past. The Portable Antiquities Scheme was launched in 1997 to create a publicly available archive of "archaeological objects" recovered from the ground by anyone other than those engaged in formal archaeological excavations (i.e., "members of the public")—in practice mainly metal detectorists. Ten years later, this government-sponsored program has some 50 employees across England and Wales, with hundreds of thousands of objects now recorded (see Egan [2005b] for the post-medieval period; for additional information, see the database under http://www.finds.org.uk).

Some of the recently devised but increasingly widely practiced branches of archaeology, within which the post-medieval period is prominent, do not necessarily produce results that routinely fit into the usual academic framework. The formal excavation of debris in a university archaeological department's van (Newland et al., 2006) suggests that the notion of imposing boundaries on the subject matter of the archaeology of the recent past may be unwise. In this case, the project was seen as a novel and striking means of teaching the fundamentals of stratigraphic excavation rather than providing any answers within the usual post-medieval agenda. Forensic archaeology is very largely preoccupied with recent crimes, whether individual murders or large-scale war atrocities (though its methods and highly focused problem-solving preoccupations within a given legal framework can be applied to evidence of any date). Several of the "community archaeology" projects have deliberately dealt with the buried remains of the very recent past, sometimes creating an archaeology of living memory (at least for some older participants). This enhances the involvement of local residents, in the right circumstances giving a uniquely keen, even poignant, association with what is being revealed. The jury is probably still out, but there are claims that such projects will at best only accidentally and very rarely answer the

wider, "big" archaeological questions, if they tackle these at all. As one of the archaeologists (Blair, 2006) involved with the "Archaeology of the Blitz" project at Hackney, north London, remarked, "little can be learned from the excavation that is not already known. But that is not the point. The role of Second World War archaeology . . . is to use excavation as a powerful educational tool, a nexus for interdisciplinary scholarship, and a source of social cohesion and a sense of shared community history." The basic aim to involve local communities with their own archaeology can only be a good thing, and post-medieval archaeology inevitably enjoys a near monopoly in this particular branch of local studies. It is ironic that (with honorable exceptions) it has taken an external stimulus from on high to draw the attention of those engaged full-time in the subject back to the contribution that amateurs can make and—not least for post-medieval archaeology—have made in significant measure.

The recent period of dramatic expansion in the subjects tackled by post-medieval archaeologists has seen the definition of new areas and the wide acceptance by the profession of some themes that were previously pursued by just a few enthusiastic individuals. This appears to have come about largely through the parallel thinking of many individuals, rather than from some debate or direction from universities, though the government has played a significant part in some of this, as noted above. It has become difficult to think of a theme that has left standing remains or traces in the soil that is not now within ambit of post-medieval practitioners. Sporting infrastructure has recently come into the recognized fold—ironically in the very week the old Wembley Stadium (built of reinforced concrete in the early 1920s) was demolished without the kind of detailed record that is being advocated. There are some new organizations, the Archaeology of Zoos Network (see O'Regan, 2002) and the Society for the Study of Childhood in the Past, which were founded largely by archaeologists, are multiperiod and international in scope. It will be interesting to see which of these many emerging themes develop a sustained theoretical base, with widely recognized specific aims and priorities, and which ones may prove simply to be isolated, one-off projects without any specific wider framework either to guide the ways the evidence is tackled or even to encourage what has been recorded to be set alongside more traditional archaeological data. A few outright "wacky" projects may get carried out, but overall the expansion is taking post-medieval studies into valid new areas to tackle fresh material of real interest.

While most of the developments discussed above give cause for some satisfaction, there is still abundant scope for building further on these achievements. The latest period is certainly coming to be routinely considered for field investigation and research, at least by the younger generation. County and regional summaries of archaeology published very recently still tended to end with 1500 or 1540 C.E., occasionally with a summary of the area's "industrial archaeology" in a last chapter. A recent straw in the wind is a county archaeology for Sussex, which does indeed go on to ca. 2000 (Rudling, 2003). It would be good to see the next generation routinely taking its local archaeologies in a single synthesis to the turn of the millennium.

One measure of success in any subject is surely the sustaining of a regular academic journal. The initial concern (noted above, in the introductory section) that the subject would be unable to continue generating a critical mass of scholarly papers to keep the proposed journal *Post-Medieval Archaeology* going can now be seen in the long term to have been unfounded. The change in 2003 (Volume 37) to a twice-yearly format to cope with a significant increase in copy must be a clear indicator of solid achievement. Another encouraging indication of expansion is the appearance in Ireland of a new sister organization in 2001, the Irish Society for Post-Medieval Archaeology, which holds an annual conference (some of the papers given at these will be published together as monographs) and has its own newsletter.

Looking back at the "editorial" founding statement at the start of the first issue of *Post-Medieval Archaeology,* which noted the roles of faith, hope, and charity in the launching of the new journal (Anonymous, 1967), the faith and hope of the founders have surely been vindicated. SPMA is now a registered charity that is obliged to provide a range of services for its members and others within the subject—a duty the organization's leaders take very seriously. While the debate about the precise duration of the post-medieval period (touched on in the

same editorial) continues without any sign of consensus, the Canadian paper intended for the first volume was in the event published the next year in the second one (Sutermeister, 1968). If only all the delays to the dissemination of worthwhile information in our subject were so brief—the field has truly grown to become a vast one.

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The Practice and Substance of Historical Archaeology in Sub-Saharan Africa

Natalie Swanepoel

Introduction

James Kirkman (1957) first used the term "historical archaeology" pertaining to work in Africa to characterize his study of Islamic sites in East Africa, but we might regard much of the archaeology on the continent as historical even though it is not officially designated as such. This is in large part due to the interdisciplinary nature of African archaeology. The more traditional (Americanist) forms of historical archaeology are primarily found in two African subregions, namely western and southern Africa, perhaps because these two regions have histories that shared features with the North American experience and were of interest to Americanists. West Africa was the origin of diaspora populations, and southern Africa also had a history of settler colonialism (Robertshaw, 2004). Early historical archaeology in both of those areas focused on the structural legacy of European contact and colonization, and included the cataloging and recording of the forts and castles built by Europeans for trade (Mitchell, 2002; Posnansky and DeCorse, 1986). Studies of the African Iron Age, however, often incorporate oral traditions, historical records, ethnohistorical, anthropological, and ethnoarchaeological studies in their reconstruction of the past and can thus be termed historical archaeology (see Posnansky, 1959; Schmidt, 1978).

Even this is a somewhat recent development, though, and can be traced in part to post-independence interest in African countries in writing the history of known historical groups, as well as the reconstruction of the past glories of African civilizations (Posnansky, 1982). Prior to this, the bulk of archaeology on the continent had concentrated on aspects of human evolution—the Stone Age and Early Iron Age expansion—rather than the later historical period, for which multiple sources of information exist (Robertshaw, 2004). Today, historical archaeology is a burgeoning subdiscipline within African archaeology, particularly in the sub-Saharan region. It is also an incredibly diverse subdiscipline—as diverse as the continent itself—focusing on many facets of the African experience over the last 500 years and earlier, including internal developments; contact with colonial and colonizing powers; and different kinds of texts, such as written documents (European and Arabic), oral documents (traditions, myths, and praise songs), and rock art (pictographs and petroglyphs).

Defining Historical Archaeology in Africa

It is as a result of this diversity that defining historical archaeology in Africa is a somewhat contested issue (Connah, 2007). While many Africanist historical archaeologists might subscribe to some version of "historical archaeology as methodology" (Wesler, 1998a) or as "the study of a period," most would reject the notion that it is archaeology used in conjunction solely with documents or that it is the study of the expansion of Europe. Definitions that emphasize written sources exclude those African societies that were nonliterate before the arrival of colonizing

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powers, and the presence of documentary texts on the African continent varies over time and space. The earliest Arabic documents for the Sudanic and Sahelian belt, for instance, date back to approximately 800 A.D. For East Africa, there are classical—as well as Arabic and even Chinese—descriptions, although these are often difficult to correlate to specific places in the archaeological record (Horton, 1997). For much of the rest of Africa, the first documentary texts were produced only in the nineteenth century, at the time of European colonization (Posnansky and DeCorse, 1986). European documents predating this colonial expansion often relate only to events on the coast or provide second-hand information on the interior, as Europeans only penetrated to the hinterlands fairly late in the colonial enterprise (Pikirayi and Pwiti, 1999).

Equally, those definitions that conceptualize historical archaeology as the study of the expansion of Europe are regarded as Eurocentric (Pikirayi and Pwiti, 1999), as they negate the interactions that African societies had with other parts of the world, such as China or India. In addition, such definitions serve to privilege the role of Europeans, while not acknowledging the part played by indigenous groups (DeCorse, 1996a) and the possibilities of resistance by those groups (Lane and Reid, 1998:161). Schmidt (2006) categorically rejects the notion that historical archaeology is predominantly the study of the expansion of Europe and the rise of capitalism and industrialism, as he sees this as privileging Western history over indigenous, local understandings. Practically speaking, the presence of European trade goods is not a reliable marker of a "contact horizon" either, as the process by which goods originating at the coast filtered to societies in the interior was not a smooth one. In addition, many of these goods were already present as a result of preexisting trans-Saharan or Indian Ocean trade routes, before Europeans made landfall on the continent. Equally, because the bulk of European involvement in Africa was confined to the coastal regions until the nineteenth century, the far-reaching changes that were sweeping through African societies at that time were taking place within the context of extant African social networks (DeCorse, 1996a).

As a result of these drawbacks, most historical archaeologists in Africa prefer definitions that allow for the widest diversity of possible sources, and that highlight the agency of African populations (Lane and Reid, 1998). Many archaeological studies of the more recent time period in sub-Saharan Africa have not had as their primary interest encounters with Europeans, but rather issues of state formation, technology, ethnicity, and other cultural–historical developments (DeCorse, 1996b).

As employed in different synopses, African historical archaeology has been variously defined by a number of scholars. Posnansky and DeCorse (1986:2), while acknowledging the limitations of the definition, choose to focus on the "period ... in which the principal source of contextual information is provided by documentary evidence ... in this sense it applies particularly, but not exclusively to the activities of European societies and the communities which are known better from European documents than from oral history and other sources." More recently, Pikirayi (1999:70) adopted an inclusive definition: historical archaeology as "the study of sites which can be interpreted with the aid of historical evidence such as written sources, oral traditions and historically datable imported artifacts," and elsewhere (Pikirayi, 2006) has written of how such "internal" sources as oral traditions, local histories, and folklore can balance the mainly "external," written sources. The editors of the volume *African Historical Archaeologies* (Reid and Lane, 2004), in contrast, adopt a methodological definition incorporating studies from a variety of time periods that make use of a diversity of source materials (e.g., Edwards, 2004a; Ray, 2004). This is why they choose to use "archaeologies" in the plural for the title of their book.

While acknowledging all of these caveats and restrictions, space does not allow here an in-depth review of all forms of historical archaeology in Africa, however defined. To that end, this review will reference those studies that draw on a diversity of sources—archaeological, oral historical, documentary, and pictographic—and that focus on approximately the last 500 years in sub-Saharan Africa. This period of time saw tremendous changes taking place in Africa, including the widespread expansion of Islam and Christianity, the incorporation of African trade networks into the Atlantic and Indian Ocean worlds, European contact and

colonization, the rise and decline of the trans-Atlantic slave trade, and the ever-increasing involvement of Africa in the global economy (DeCorse, 1996b). This focus will thus exclude other text-based archaeologies of Africa, such as those pertaining to ancient Egypt, Nubia, and Ethiopia. Much of the work on West African city states and the early history of the Swahili will also not be discussed in detail (but see Connah, 1987; Insoll, 2003; MacEachern, 2005, for overviews), except where it illuminates the discussion of the more recent period.

I have chosen a broadly chronological, rather than methodological, framework because one of the problems facing archaeologists, who wish to make their studies as broadly comparative as possible, is the existence of divisive labels applied to the various time periods in parts of Africa. Thus, in southern Africa, many agro-pastoralist sites dating to the last 500 years are studied under the rubric of the late Iron Age, while many later Stone Age sites were occupied at the same time that the Dutch were building their settlement at the Cape. This occasionally hampers comparison between contemporaneous sites associated with different sociocultural groups and the study of interactions among such groups (Reid and Lane, 2004). Therefore, the 500 years should not be seen as an attempt to foreground the process of colonialism or the expansion of Europe as framing mechanisms, although they are important themes in the archaeology of this period.

Source Materials

There are a wide variety of complementary source materials available to archaeologists in Africa. The type and chronological range of such source materials are, however, specific to different regions. The earliest written documents comprise Arabic accounts of the savanna and Sudan in western Africa and date to the late first millennium A.D., while the first European accounts only appeared in the fifteenth century (DeCorse, 1997). Many of the later Arabic manuscripts, such as the thousands to be found in Timbuktu, have yet to be fully explored (Minicka, 2006). There are also some indigenous writing systems—such as the Vai script—but they are of limited use as they were only invented in the nineteenth century and have a very narrow scope (DeCorse, 1997). Written sources pertaining to East Africa and the Horn of Africa include early classical, Arabic, and Ethiopic texts. From the fourteenth century onward, there are royal chronicles and various religious texts relating to Ethiopia's later history (Connah, 1987), while the Kilwa Chronicles (A.D. 1550), preserved in written Arabic, form oral traditions about the origins and history of Kilwa, a port on the Swahili Coast (Sutton, 1990). Local sources notwithstanding, the bulk of written sources that exist largely offer observations made by outsiders to the societies concerned and are thus prone to exaggeration, inaccuracy, or irrelevance. Early Arabic sources in particular are often far from complete in their descriptions of the early African cities, but have nevertheless proved useful in archaeological research at places such as Tegdaoust and Azugi (Mauritania); Jenne-jeno, Timbuktu, and Gao (Mali); and Azelik and Marandet (Niger); but these fall outside the scope of this review (but see Connah, 1987; Insoll, 2003).

Oral traditions are particularly useful for archaeologists working on Iron Age communities, as there is often a great deal of continuity between present-day and past communities. Inspired by the work of such oral historians as Jan Vansina (1965, 1985), archaeologists draw on traditions such as clan and lineage histories, king lists, praise poetry, and myths. In addition to traditions collected from extant communities, there are many oral accounts recorded by such other agents as missionaries; travelers; administrators; and the educated, indigenous elite (Schmidt, 1990). Oral sources, however, have a host of attendant problems that researchers need to be wary of, including the lack or mode of official transmission from one generation to the next, the manipulation of traditions to meet present-day political needs, the fact that much information may be rendered symbolically, and the problems of telescoping (collapsing of time) or feedback from more recent historical studies and texts (DeCorse, 2001a; Schmidt, 1990). There is a great deal of disagreement about the depth of time for which oral information can be used. While Schmidt (1978, 2006) demonstrated that myths and other traditions often encode knowledge of the landscape by using

archaeological and other features as mnemonic guides, the reliability of traditions generally and the existence of cultural continuity even for periods as short as 500 years has been questioned by some (Pikirayi and Pwiti, 1999).

There is some discussion as to whether ethnoarchaeology should constitute part of an African historical archaeology. Posnansky and DeCorse (1986), for example, feel that much of the Iron Age archaeology that draws on oral sources might be better characterized as ethnohistory or ethnoarchaeology, while Lane and Reid (1998) argue that the long-term ethnoarchaeological studies that have been carried out over decades in areas such as the Kalahari may well qualify as a form of recent historical archaeology. The degree to which archaeologists subscribe to either of these two views is largely dependent on the context and research questions of their own studies, but ethnoarchaeology has nonetheless emerged as an important technique for building models to help interpret the archaeological record of the more recent past (Agorsah, 1985; Lane, 2006).

Also at issue is *how* these diverse sources are used in archaeological interpretation. For too long, archaeology was seen merely as a way to confirm information contained in oral traditions, to identify the location of sites, or to reaffirm details from documentary sources. A new generation of Africanists, however, is today more concerned with looking for the disjunctures between sources as a way of generating new understandings about the past. Ann Stahl (2001), in her work on Banda (Ghana), for instance, argues that rather than viewing alternate sources as "additive," they should instead be used in a supplementary way, that is to say comparatively, so as to enrich our view of "African historical practice" (Stahl, 2001:18). In this respect, information obtained archaeologically provides a counterpoint to oral and documentary sources. Stahl conceives of her approach as a kind of historical anthropology, and is especially sensitive to the temporality of source material, using the direct historical approach. Archaeology is presented as a tool that provides local-level data, as opposed to the "metropolitan" view of documents, and can thus inform on the choices that people made in the past in relation to their broader political–economic contexts. Schmidt (1995, 2006), too, sees archaeology as offering a counterpoint to dominant views of history. He argues that historical archaeologists in Africa still do not use oral histories, in conjunction with archaeology, to their full potential to subvert colonial and ethnocentric histories. In his view, historical archaeologists should actively be taking on questions of "historical misrepresentation," determining where archaeology contradicts commonly understood versions of the past and tackling these misrepresentations head on (Schmidt and Walz, 2005).

Regional Variations

Historical archaeology in Africa has taken on distinctly regional characteristics. As stated above, southern and western Africa have been very much impacted by the Americanist traditions of historical archaeology, while in eastern Africa more attention has been focused on the cultural and economic history of the coastal Swahili than the European presence (LaViolette, 2004). At the same time, the use of oral traditions and ethnohistoric material in the reconstruction of agro-pastoral societies of the late Iron Age is common throughout Africa. In view of the connections that have long existed between different parts of the continent (e.g., between south-central and eastern Africa), any geographical divisions must, at some level, be regarded as arbitrary. The following sections thus represent very broad divisions and may overlap at the edges.

Southern Africa

While much historical archaeology in southern Africa has been primarily descriptive (for example, European artifacts, architecture, industries, colonial settlement patterns, and military sites), it is today composed of numerous strands of research that address different aspects of the last five centuries. These include studies of European colonies, particularly Cape Town and the complexities of Cape colonial society; the nature and impact of the expanding colonial frontier; the internal processes of the various indigenous societies during the

aforementioned era (Hall, 1993); and the complexities of early industrial society in nineteenth-century South Africa (Behrens, 2005).

A self-proclaimed southern African historical archaeology first emerged from the University of Cape Town Historical Archaeology Research Group in the 1980s and early 1990s. Extensive research was conducted into life in seventeenth- to nineteenth-century Cape Town and its hinterland. This work was spurred on by the large numbers of urban sites discovered during development projects in Cape Town and the growing role of cultural resource management. Drawing on a body of material evidence—including architectural form, fortifications, pictorial sources, and archaeological assemblages from contexts as diverse as backyards in Bree and Sea Streets (Hall, 1992), the Barrack Street well (Hall et al., 1990b), the Cape Castle (Hall et al., 1990a), the Governor's mansion at Vergelegen (Markell, 1993), the forestry post in Newlands Forest (Hall et al., 1993), as well as cemeteries and isolated graves (Cox and Sealy, 1997; Cox et al., 2001; Sealy et al., 1993)—archaeologists have addressed such topical issues as the formation and condition of the Cape underclass (including laborers, fishermen, washerwomen, and slaves), who are underrepresented in the extensive colonial records, as well as class and gender relations. In these studies, the archaeological record was regarded as a text to be read in conjunction with multiple other texts such as documents, architecture, and the pictorial record (Hall, 2000). The discordant themes reflected in these "texts" were used to inform on the manipulation of ideology in class- and gender-conscious colonial Cape society. Archaeologists such as Brink (1990) and Gribble (1989) built on the pioneering work by architectural historian James Walton (1989), refining the architectural sequences for the traditional Cape Dutch house and investigating the hidden, ideological meanings represented in these changing floor plans, while Malan (1990) analyzed the probate records spanning the second half of the eighteenth and first half of the nineteenth century and discussed the changes in material culture associated with the transition from Dutch East India Company (VOC) to British rule at the beginning of the nineteenth century. This change in administration resulted in widespread changes in material culture inventory and other cultural practices "from place settings to architecture" and also resulted in fundamental shifts in the role of commodities in everyday life (Hall, 1993; also see Lucas, 2004).

Although the study of the lifeways of slaves in South Africa is complicated by the lack of specific contexts in which their experiences might be archaeologically documented (Hall et al., 1993), there are a number of projects that have dealt with the issue. Not least among these is a subset of isotopic studies on the bones of individuals interred in Cape Town during the seventeenth, eighteenth, and first half of the nineteenth century (Cox and Sealy, 1997; Sealy et al., 1993). These include individuals excavated from Cobern Street, one of Cape Town's many unofficial cemeteries. Fifty-three of the 121 individuals recovered from the site were subjected to isotopic analysis. The results, when combined with burial practice, revealed a diverse population of both the locally born and immigrants—from farther north in Africa and Muslims from the east. While it is unknown if all of the individuals were slaves, they were definitely part of the Cape underclass (Apollonio, 1998; Cox et al., 2001).

There are only a few studies that examine the expanding colonial frontier and its impact on indigenous populations in southern Africa. In the eastern Cape (South Africa), Jeppson (2005) uses an intersite comparison of imported ceramics from four different contexts: a rural homestead, a town center, a fort, and a mission station, to argue that the inhabitants used ceramic decoration and form to reflect and actively communicate their identities within their colonial context (also see Winer and Deetz, 1990). Schrire (1995) initiated a project on the western coast of South Africa at the site of Oudepost, a VOC outpost just north of Saldahna Bay where excavations yielded large assemblages of food debris, ceramics, and other artifacts, including stone tools of indigenous manufacture. Her work there examined both the VOC soldiers' living conditions and their interactions with, and impact on, the lives of the indigenous Khoisan inhabitants in the vicinity, particularly as a consequence of their differential use of the environment.

The impact of the coastal European presence is also a theme of Kinahan's (2000) research in Namibia. She identified 58 archaeological sites in the !Khuiseb Delta near Walvis Bay that are

associated with pastoral communities who traded with European ships. These sites yielded a wide variety of local and exotic trade goods—particularly locally manufactured copper—and imported glass beads. Kinahan argues that while initial contact with European ships may have stimulated local production networks, over time the trade in goods of unequal exchange values led to the erosion of regional alliances and the inability of pastoralists to transform their newly acquired wealth (beads) back into cattle when necessity demanded it, thus exposing them to the risks inherent in the pastoralist economy. Similarly, Sampson and others (Moir and Sampson, 1993; Sampson, 1995; Voigt et al., 1995) have used European artifacts and faunal assemblages recovered from rockshelters in the upper Seacow River valley to trace the impact of the expanding European frontier on indigenous hunter-gatherers in the South African interior.

Rock art is an important alternative text with which to access indigenous responses to the processes of colonialism and conflict on the expanding frontier in South Africa. Ouzman (2005), for example, has interpreted a collection of red, white, and orange finger and rough-brush paintings of humans (including armed horsemen), animals, and geometric figures in the South African interior as a reflection of the militant and magical interests of a marginal frontier population, the Korana, who operated as raiders in the area. Similarly, Yates et al. (1993) note the presence of precolonial, symbolic aspects associated with colonial motifs (including figures in European dress and wagon teams) present at sites in the southwestern Cape, leading them to conclude that the art was probably produced by individuals of Khoisan descent who had become integrated into the frontier economy by the late eighteenth or early nineteenth century. Van Schalkwyk and Smith (2004) also use rock art and oral texts as emic sources to counterbalance the official, text-based accounts of the 1894 Maleboho War between forces of the South African Republic and the Hanawa (under their leader Maleboho) in the Limpopo Province of what is now South Africa.

Southern African urbanism and the processes of state formation in agro-pastoralist communities are also an important topic of archaeological investigation. In South Africa, several of the Zulu capitals, such as Ondini, Nogdwengu, Kwa-Bulawayo, and Mgungundlovu, have been archaeologically documented (Parkington and Cronin, 1979; Whitelaw, 1994). Tswana towns, in particular, have attracted archaeological attention (Boeyens, 2000; Hall et al., 2006; Hall et al., 2007; Lane, 2004). In this context, the eighteenth and nineteenth centuries provide rich ground for projects that can use the interplay between oral traditions, early European travel and missionary accounts, and the archaeological record. While most eighteenth-century Tswana lived in fairly dispersed communities, the nineteenth century saw increasing aggregation, and political and economic competition between Tswana lineages. Some lineages, such as those at Marathodi, capitalized on their access to raw materials, including copper, to cement their regional power. The archaeology at the site is contributing to our knowledge of the technological, sociocultural, and political–economic aspects of copper production, and its role in regional trade (Hall et al., 2006).

In Botswana, archaeological work at the capitals of the Bakwena *merafe* ("polity") and of the Bangwato, Nstsweng (1863–1930), and Phalatswe (1889–1902), respectively, has highlighted the diverse responses displayed by local leaders and their people when faced with increasing European influence (Lane and Reid, 1998). Architectural and settlement data demonstrate marked continuities in these material forms well into the twentieth century. Rectangular house forms, generally a consequence of European influence, are present only in specific contexts, and leaders such as Khama III were known to actively prevent the building of anything other than round dwellings. He did, however, welcome missionaries; the church at Phalatswe was centrally located in a prominent part of the settlement. In contrast, his counterpart at Ntsweng—Sechele I—was more ambivalent about Christianity's influence, and thus had the mission located some distance from the settlement (Reid et al., 1997). Such mixed responses to these similar forces are obviously determined by a wide variety of local factors. Elsewhere (in South Africa), Hall (1997) has interpreted a shift from round to rectangular forms at the site of Mabotse to be indicative of tensions over gender relations. Reid (2004) has also used the faunal assemblages from different parts of Ntsweng to test the theory that status differences within these settlements will be reflected in the differential distribution of faunal components.

Archaeology is also valuable in helping to understand the indigenous political processes of the time. In Zimbabwe, two projects have focused on various aspects of state-level societies during the era of European contact. These projects studied the Mutapa state (1450–1900 A.D.) in the north, which was in contact with the Portuguese from the sixteenth century onward, and the Ndebele state in the central and southwestern areas of the country (Pikirayi and Pwiti, 1999). Work on sites associated with the Mutapa state has revealed important insights not only into the nature of the Afro-Portuguese network but also the historical connections between the Mutapa state and earlier sociopolitical entities, such as the Zimbabwe polity (Pikirayi, 1994; Pwiti, 2004, also see Sinclair, 1987). The site of Baranda yielded a wealth of trade artifacts, such as blue-on-white porcelain and Far- and Near-Eastern stoneware, glassware, and beads in association with locally produced pottery classified as falling within the Zimbabwean tradition. Yet it differs from Zimbabwe-type sites in that it does not have stone walling, and thus may represent a new kind of center that emerged after the decline of the Zimbabwe state. Drawing on evidence for fluctuating settlement patterns and the appearance of fortified settlements, Pikirayi has questioned Portuguese written accounts that imply long-term political continuity in the power wielded within the sphere of the Mutapa state. He has argued that it is likely that the state in fact shrunk over time with a number of smaller polities emerging to compete for control within the area, possibly as a result of new economic opportunities offered by the onset of mercantile capitalism (Pikirayi and Pwiti, 1999).

Eastern Africa, Madagascar, and the Horn

Historical archaeology in eastern Africa has mostly concentrated on the coast and the long-distance trading connections with other Indian Ocean communities (Horton, 1997). On the coast, particular attention has been paid to the nature and origins of Swahili culture and its hinterland (Chittick, 1974; Horton, 1996; Kusimba, 1999), as well as early Portuguese contact and the arrival of the Omani Arabs (Fleisher, 2004), while the later British and German colonial periods have largely been neglected (LaViolette, 2004; see Posnansky, 2006). Inland, earthwork sites in Uganda and settlement patterns in Kenya (Onjala, 2003; Scully, 1979), as well as the nature and role of ironworking (Reid and McLean, 1995) and other craft production (Sutton, 1990) are ongoing foci of research.

The Swahili Coast refers to the 3,000 km of coastline between southern Somalia and Mozambique, as well as the islands of Pemba, Zanzibar, Mafia, the Cormores, and some regions of Madagascar. These societies share a common language, kinship structure, religion, and a history of involvement in Indian Ocean trade networks. Traditionally, the archaeology of Swahili society has been associated with the study of "stone towns," which epitomize an urban culture characterized by coral house structures, mosques, and tombs (Horton, 2004), but this is now changing (see below). The full history of Swahili society extends well beyond the scope of this review; there is evidence for cultural continuity as far back as 1,500 years ago (Chami, 1998). There are classical documentary sources relating to this part of the African coast dating to the first and second centuries A.D. (such as the *Periplus Maris Erythraei*), but they are of limited use (Chittick, 1963). Of more importance are the fifteenth-century Kilwa Chronicles, which record a preexisting oral-historical tradition (Sutton, 1990). They provide a chronology of the reigns of the different sultans of Kilwa, which, when correlated with numismatic evidence and imported ceramics, allow for the dating of architectural and other features at the site of Kilwa (Sutton, 1990).

From the 1940s on, such scholars as James Kirkman (1954) and Neville Chittick (1974) conducted excavations of mosques and houses in Swahili port towns such as Gede and Kilwa. Their research was primarily centered on questions of architecture, external trade, and the influence of Islam (Kusimba, 1999). While they interpreted these Swahili sites as arising due to the stimulus of trade, and subsequent immigration, from Islamic countries (Chittick, 1963), later work at such sites as Shanga, Zanzibar, and Pemba has emphasized the indigenous, African underpinnings of Swahili society (Horton, 1991, 1996; Fleisher and LaViolette, 1999; see also Robertshaw, 1995). This has resulted in a "paradigm shift" in archaeological studies of the Swahili Coast,

in that research concerns have moved away from a primary focus on the elite—a focus hitherto encouraged by the durability and visibility of the coral architecture in the stone towns—to a concern with the full range of Swahili society, including those who would have inhabited the far less visible, and more difficult to locate, wattle-and-daub structures (Fleisher and LaViolette, 1999). Regional relationships between the towns and the villages in the rural hinterland, the source of trade goods and foodstuffs, are now also being explored (Fleisher, 2003; Horton, 2004).

Social relationships within latter-day Swahili society have also been examined through the lens of material culture. Donley-Reid has discussed how the spatial relationships within elite eighteenth- and nineteenth-century residences in Lamu and Pate are reflective of the highly structured nature of the Swahili household, where slaves were relegated to the ground floor, and one's social stature increased as one moved higher in the physical structure (Donley, 1987; Donley-Reid, 1990). Similarly, social relations at nineteenth-century plantations are now also the focus of research. The Zanzibar Clove Plantation Survey was initiated in order to record the variable range of sites associated with plantations in nineteenth-century Zanzibar (Croucher, 2004).

While the links between the East African coast and interior, fostered by the trade in slaves, ivory, and other goods, are still understudied (LaViolette and Fleisher, 2005), the social disintegration and violence that were the legacy of the slave trade in the East African interior have been archaeologically documented. The slave trade, financed by European, Indian, and Arab merchants, was responsible for widespread population displacement. There is evidence for site abandonment in the sixteenth century, and villagers appear to have retreated into bushy, rocky country to escape the danger of kidnapping and attack (Kusimba and Kusimba, 2005). Kusimba (2004) notes the presence of rockshelters fortified with extensive dry-laid-stone walling in the Tsavo area (100 km inland from the Kenyan coast) that date to approximately 300 years ago, a time coincident with the rise of the trade. Excavations at three such rockshelters occupied between the seventeenth and nineteenth century demonstrate that they were only occupied for fairly short periods and that they probably served as refugia, for both humans and animals, as and when the communities responded to specific threats. Environmental conditions may also have played a part in population mobility, as the overhunting of elephants allowed the reassertion of the woodland and forest environments that allow the tsetse fly to thrive (Kusimba and Kusimba, 2005). The effects of the slave and other trade are also being studied in Tanzania. Areas associated with the caravan trade have been surveyed (Croucher and Wynne-Jones, 2006), and a nineteenth-century trade *caravan-serai* in Bagamoyo has been excavated (Chami et al., 2004).

Eastern Africa is also rich in historical archaeology that is not associated with the Swahili Coast. Much early work in Uganda, for instance, was directed toward testing the veracity of oral traditions by comparing them against the archaeological record. This was one of the aims of Posnansky's (1968) work at the Ankole royal settlement of Bweyorere, occupied at various times in the seventeenth, eighteenth, and nineteenth centuries. Similarly, at Bigo and other earthwork sites in Uganda (Posnansky, 1966, 1969), oral traditions linking the sites to the Cwezi state were crucial in the archaeological interpretations of the features (see also Schmidt, 2006). In the 1960s, the archaeology was originally seen as confirming the existence of such a state, as posited by historians. Although that supposition has now been undermined by a newer generation of historians, the earthworks and their implications for the existence of politically complex societies in the area continue to be a subject of archaeological study (Robertshaw, 1995).

Political complexity is also a subject of interest for archaeologists in Madagascar. In addition to the archaeological evidence, there is a wealth of oral traditions and European travel accounts that scholars can draw on in reconstructing Malagasy society of the last five centuries (Parker Pearson et al., 1999). European reports of politically centralized societies in various parts of the island are affirmed by the wealth of local and imported goods, and burial structures that are recorded archaeologically (Dewar and Wright, 1993). While it seems that there was endemic warfare between these polities before the arrival of Europeans in the sixteenth century, the situation was worsened by the arrival of French troops and their guns. Apart from access to the new

weapons, the local people seem to have generally eschewed sustained contact with the colonizers, and early European efforts in Madagascar can generally be viewed as unsuccessful (Parker Pearson, 1997).

Colonization of a different kind is the focus of historical archaeology in the Sudan. While much of the more recent history of the Sudan remains archaeologically unexplored, and is often reduced to a simple dichotomy between a recent Islamic past and the preceding Christian Medieval period, connections with the Near East are now being examined through material culture (Alexander, 2000; Edwards, 2004b). Of particular interest is the Ottoman Empire, which by the sixteenth century had established frontier garrisons in Sudan, north of the Third Cataract. This area thus emerges as a periphery to a larger network established by the Ottoman Empire (el Zein, 2004). The Maha Survey Project has recorded historical settlement patterns, cemeteries, and tombs. Scholars such as Salih (2004) have probed the transitional period between the Christian and Islamic eras in this part of Sudan.

Central Africa

Historical archaeology in the Central African region (including such countries as Cameroon, the Central African Republic, Equatorial Guinea, Gabon, Congo-Brazzaville, the Democratic Republic of the Congo, Rwanda, Burundi, and Angola) has been limited in scope, yet holds the potential of yielding valuable insights into the nature of many prominent African kingdoms at the time of European contact. During the colonial period (in 1938 and 1942), some limited excavations were conducted by missionaries (partially supervised by a Belgian archaeologist) interested in documenting the martyrdom of a Flemish Capuchin in 1652. They did not discover the tomb that interested them, and abandoned their excavations soon after, but their work at 35 tombs in an old church informs us about the material manifestations of Christian conversion in the Kongo Kingdom. Artifacts recovered included a mixture of items of both local and exotic manufacture, such as Kongo pottery and pipes with religious medals, crosses, weapons, bottles, decorated nail heads, and tombstones (de Maret, 2005). Similar insights are also offered by Denbow's (1999) study of the iconography of early-twentieth-century tombstones along the coast of Congo. Denbow uses the symbols incorporated into these cement grave markers to demonstrate the way in which Congolese cosmology was transformed by European contact, the incorporation into the world system and the trans-Atlantic slave trade, and how the Congolese in turn appropriated Christian symbols to reflect deeper, local cosmological meanings.

Some survey work and limited excavation have also been conducted in the Soyo Province of the Kongo Kingdom and its capital, Mbanza Soyo by the Laboratorio Nacional de Antropologia (Angola), but the material recovered has yet to be studied or published in full. In Mbanza Kongo, capital of the Kongo Kingdom (now São Salvador in northern Angola), road works and other development have revealed potential sites, but as yet this potential has not been fully mined (de Maret, 2005). The full-scale development of historical archaeology in this region has been retarded by the political and security situation in recent decades and the dearth of archaeologists on the ground (de Maret, 1991, 1994). When this situation improves, the region will provide fruitful ground for research.

Western Africa

As in other parts of the continent, historical archaeology in western Africa has been characterized by a joint concern with European contact and the slave trade, as well as such internal developments in African society as urbanism (Anquandah, 1993; Boachie-Ansah, 1986a; Effah-Gyamfi, 1985; Stahl, 1994), trade (Shinnie and Kense, 1989), and sociopolitical complexity (Haour, 2005; McIntosh, 1999). Material culture and craft production—such as pottery making (Cruz, 2003), textile production (Stahl and Cruz, 1998), iron smelting (de Barros, 1985; Goucher, 1981; Goucher and Herbert, 1996), and locally produced tobacco pipes (Boachie-Ansah, 1986b; Ozanne, 1966; Welling, 2000–2001)—have also received particular attention.

From the fifteenth century onward, European ships from numerous nations were making regular

landfalls on the western coast of Africa, and Europeans had soon established numerous forts and trading posts (Wood, 1967), especially along the Gold Coast (DeCorse, 1992). Later on, many of these posts became notorious as the African departure points in the trans-Atlantic slave trade. Mostly, however, they have a longer and far more complex history, entangled as their occupants were in the social, political, and economic lives of the indigenous communities along the West African coast. These European outposts were the focus of most of the early conservation and protective legislation in countries such as Ghana (DeCorse, 2001a), and were thus the locus of much early architectural research (Lawrence, 1963) and limited excavations (Simmonds, 1973). Other early trading outposts, such as the inland "factories," have proved difficult to locate archaeologically (Wood, 1967), but the presence of European trade goods on numerous sites testifies to the degree to which European material culture traveled well ahead of Europeans themselves (Wesler, 1998a).

The establishment of European trading forts often gave added impetus to the towns or villages situated in their vicinity, and thus altered the existing sociopolitical relations among African communities. Those African communities that were in proximity to European traders have been the subject of several in-depth, long-term historical archaeological projects. DeCorse's (1992, 2001a) research at the town of Elmina has documented the extensive economic, sociopolitical, and cultural change that occurred in the town adjacent to a Portuguese, later Dutch, fort. Most importantly, he has illustrated the degree to which African populations maintained their worldview in the face of an influx of new and different kinds of material goods. Although they may have adopted new forms of material culture, construction techniques, and forms of spatial organization, continuity in foodways, burial customs, and use of space indicate that many social and religious practices were retained. Other projects initiated under DeCorse's Central Region Project, and using archaeological, documentary, and oral sources, continue to explore the sociopolitical situation in coastal Ghana, examining both the emergence of political hierarchies in the context of European trade in the Eguafo polity (Spiers, 2007) and the longer-term social and political transformations among societies in the coastal hinterland (Chouin, 2002).

It is clear that relations between European traders and local populations in West Africa were extremely variable. At Elmina, for example, the European traders wielded considerable power over their relationship with the local townspeople, whereas at the site of Savi, the capital of the historic Huedah Kingdom (Benin), the elite asserted their control over the European traders by controlling the space in which they moved, thereby confirming their power in the eyes of their subjects (Kelly, 1997). Research is ongoing at other European trading posts, such as Gorée Island, off the coast of Senegal (Thiaw, 2003).

As is to be expected, the slave trade and its impact on local African populations is an important research question in West African historical archaeology. Many of the changes that can be directly related to slave-trading and -raiding are readily visible in the material record in the form of changing settlement patterns, the establishment of European trading posts, the influx of foreign trade goods, and changing consumption patterns (DeCorse, 2001b). The earliest studies of the material culture related to the slave trade in West Africa were the architectural studies of the European forts and lodges on the West African coast, with limited archaeological studies of the fort interiors and, in some cases, the slave dungeons (Anquandah, 1995), while European slave plantations in Africa have also been examined (Bredwa-Mensah, 2002). The bulk of archaeological studies that look at the period of the slave trade, however, have focused on its impact on indigenous African societies.

With reference to Sierra Leone, for example, DeCorse (1991) points out that archaeological data provide evidence of significant change during the eighteenth and nineteenth centuries. Limba, Yalunka, and Kuranko settlements dating to this time were commonly surrounded by fortifications ranging from earthen walls and entrenchments, to tree stockades and thornbush hedges. The material record throughout West Africa reflects similar processes (e.g., Kiyaga-Mulindwa, 1982; Swanepoel, 2005).

In Senegal, major changes in settlement patterns and an increase in the number of fortified strongholds have been noted in connection with increased unrest due to slave-raiding, warfare, and resistance (Thiaw, in McIntosh, 2001). Similarly, Holl's (2001)

work in Cameroon has noted the increased importance of fortified sites over time. He has interpreted the labor involved in the building of these sites and the presence of large communal grinding stones as being possible evidence for the existence of village headmen. He notes that the pressure exerted by slave-raiding and warfare on target groups resulted in disparate settlement patterns: highly dispersed settlements occupied by relatively mobile kin groups and densely packed, fortified settlements. Holl (2001) infers an increase in social ranking from this settlement hierarchy and mortuary information. The settlement data reflect the existence of a regional system composed of central villages, smaller hamlets, and homesteads, which could be indicative of new leadership positions that emerged with a situation of slave-raiding and warfare. In Benin, Kelly's (2002) research on the kingdom of Hueda has provided us with evidence of settlement nucleation and, in the regions of Togo affected by slave-raiding activities, the presence of ditch-and-bank systems around the settlements of decentralized peoples and the construction of "hiding holes" in farmers' fields.

The slave trade also had far-reaching consequences for the economy of societies so affected. In the Bassar region of modern-day Togo, slave-raiding activities by the Dagomba and Tyokossi affected settlement patterns and productive activities in the nineteenth century. De Barros (2001) notes that a combination of slave-raiding and the resulting population aggregation was one of the factors in the development of Bassar as a major iron-production center. The major population centers in the Bassar regions today are all located beneath relatively large, high mountains that could have been used as places of refuge in times of attack (de Barros, 1985), and this situation also seems to have resulted in major changes in the patterns of pottery production and trade, as well as the abandonment of many habitation and iron-smelting sites.

The relationships between the raiders and the raided were, however, never straightforward. MacEachern (1993, 2001), for example, has highlighted the complicated nature of the relations that existed between differently organized societies (the state-based Wandala as opposed to the decentralized Montagnard communities) in northern Cameroon. He argues that these relationships were "ambiguous and equivocal" rather than overly determined by their differential political organization, and that conflict was only one aspect of their interaction; at other times they maintained trade, religious, and other social relations (MacEachern, 1993).

Stahl (1999, 2001) has looked at the long-term transformations of the political economy of African communities in the Banda region of Ghana, particularly as trade and other networks shifted from a northern (i.e., trans-Saharan) to a coastal orientation during the time of global European expansion. A diachronic study of changing settlement patterns, craft production, subsistence, and trade and exchange at the sites of Makala (early and late) and Kuulo Kataa offers insights into the nature of daily life and how it changed over a period of 700 years. Ogundiran (2002) too is concerned with local level changes in the political economy. He has looked at how the incorporation of new items of material culture associated with the European trade, such as beads and cowries, was absorbed into preexisting networks and belief systems in the Yoruba area of Nigeria, and how the sheer volume of goods imported during the eighteenth and nineteenth centuries contributed to the formation of new gender, class, social, political, and economic relationships.

Regional political relations between the centers and peripheries of states that have formed within the last five centuries have long been a subject of interest in Nigeria (Ogundiran, 2005). Usman's (2000) work in northern Yorubaland looks at the impact of the development of the Oyo Empire on areas peripheral, yet connected, to it. He argues that the emergence of large sites associated with chiefly elites, walled enclosures, increased ritual activity, and presence of stylistic affinities in the pottery of the two areas during the fifteenth to the nineteenth centuries can be regarded as a direct result of the political relationships that the Oyo Empire maintained with its periphery. Similarly, Ogundiran (2001) has used ceramic form and decoration to inform on the shifting participation of the Ilare District (Nigeria) in different interaction spheres between the thirteenth and the nineteenth century. He argues that changes in regional power relations will be reflected more quickly in peripheral areas as they react to new situations on the ground.

Maritime Archaeology

In their 1986 review of African historical archaeology, Posnansky and DeCorse (1986) reported on a mere five projects relating to nautical archaeology, and this specialization is still generally undeveloped on the African continent largely due to funding constraints and the lack of trained divers, archaeologists, and conservation facilities (Breen and Lane, 2003; Werz, 1997). There have, however, been several maritime archaeology projects. The South African coastline has been subject to a number of underwater surveys in order to identify shipwreck sites (Werz, 1997), while the campsites of shipwreck survivors have also been subject to analysis. One such camp in Plettenberg Bay, belonging to the survivors of the *São Gonçalo* (1630), has been excavated. The archaeology revealed that during the 10 months that the camp was occupied, the inhabitants probably worked iron from the local laterite and traded with the local Khoekhoen for cattle, as well as subsisting from hunting, fishing, and the harvesting of shellfish (Smith, 1986). One South African wreck site—that of the *Oosterland*, which sank in Table Bay in 1697—has been excavated by trained underwater archaeologists. Finds from the *Oosterland* include trade goods from the East such as spices, wicker baskets probably containing indigo dye, cowries, and tropical hardwoods (Werz, 1999).

The first systematic search for shipwreck sites in Ghana was conducted, using remote sensing, in 2003, and the presence of at least one intact site was verified. A collection of brass basins and the style of the cannons suggest a late-eighteenth-century date for the site (Cook and Spiers, 2004). This and other underwater explorations are continuing under the auspices of the Central Region Project, and comprise an important component in linking the ships that brought the trade goods to the terrestrial sites on the coast and its hinterland. Meanwhile, on the East African coast, scholars are taking an integrated landscape approach to the maritime environment of the island and port of Mombasa. This project has included both an underwater survey for wreck sites and the study of settlements and the coastal environment, including the long-term use of maritime resources by the resident population through the study of maritime faunal remains and the presence of fish traps in the harbor (Breen and Lane, 2003; see also McConkey and McErlean, 2007).

Conclusion

As should be evident from the scope of this partial review of African archaeology relating to the last 500 years, historical archaeology in Africa is thriving. It is characterized both by the use of a diversity of sources used in conjunction with archaeology, particularly oral traditions and rock art, and by a diversity of questions pertaining both to colonial encounters and indigenous processes. Since there are no simple boundaries that can be drawn between the precolonial and colonial or prehistoric and historical periods for the continent as a whole (Robertshaw, 1995), Africanists tend to view the archaeology of the more recent period merely as the endpoint of a long continuum of change and continuity (Gronenborn, 2001; Kusimba and Kusimba, 2005; LaViolette and Fleisher, 2005; MacEachern, 2005; McIntosh, 1999; Sutton, 1990). While colonial encounters brought with them deep, long-lasting impacts, Africa's long history of participation in global networks of trade and exchange (via the Indian and Atlantic Oceans and across the Sahara) means that even the recent impact of globalization needs to be cast in long-term perspective.

As should also be evident from the above, there are still gaps in our knowledge that offer enormous scope for potential future research. The interactions between societies of different scales and types of organization, the development of state-level societies, the processes of urbanization, the impact of new food crops, the incorporation of new kinds of material culture, changing land-use strategies and impact on the environment, the role of conflict in effecting sociopolitical change, and the ever-growing participation of African societies in global networks are but some of the potential questions that could be explored further. The potential that the historical archaeology of Africa has to contribute to diaspora studies (Singleton, 2001; Wesler, 1998b) has also yet to be fully realized.

A question that historical archaeologists in Africa are often faced with is "Why do the archaeology of a period that can already be reconstructed from oral and/or documentary source materials?" In view of the financial and infrastructural deficits on the continent, it is not always regarded as the most efficient use of resources. To that, we might reply that it is not only important, but necessary. It

could be argued that much interpretation in African archaeology depends, to varying degrees, on material drawn from either the documentary or oral-historical record, dating to the colonial era, or from ethnographic or ethnohistoric observations. The use of such material is, however, hampered by our lack of knowledge of the effect of colonialism and other recent historical forces on the societies in question. A historical archaeology of the continent, focusing on the last 500 years or so, has the potential to function as a bridge between the historically and ethnographically known present and near past and the archaeologically documented prehistoric past. What are the ruptures and the links; the continuities and discontinuities, particularly in the material cultural realm? In what ways can knowledge gained from studies targeting this period cause us to reevaluate what we think we know historically or ethnographically? This is not to imply that the last 500 or so years represent an abrupt break with the past, but rather to ask the questions: Did things change and, if so, how did they change?

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A Sea of Diversity: Historical Archaeology in the Caribbean

Douglas V. Armstrong and Mark W. Hauser

Introduction: Insular Cultural Expressions

The Caribbean region projects a rich diversity in cultural settings that relate to a complex historical landscape in which local contexts punctuate global trends with unique material expressions. Archaeologists have explored a wide range of social issues and intellectual problems including colonialism, contact, globalization, power, and the complexities of slavery and freedom. This chapter will provide an overview of historical archaeology in the region including a review of research foci, an examination of thematic problems that have been addressed, theoretical approaches that have been used, and perspectives on new trends and ideas that are being explored today (Figs. 1 and 2).

The social history of the region defines some of the key problems that researchers have addressed. For the Caribbean Basin, this includes understanding the region as a point of contact between European and Native Americans, a place where the Atlantic worlds of Africa, Europe, and the Americas, and in particular the Caribbean, served as a critical stage for the intersection of global relations (Fig. 3). Archaeological studies have in one way or another addressed and bridged broad geographical, cultural, and political issues with the examination of localized sites and global contexts. Archaeologists have pursued their research from a wide range of theoretical perspectives and thematic interests, but the composite results highlight the importance of understanding historical contexts of cultural diversity, the richness of local history, and the interconnected nature of social relations from multiple scales of analysis.

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Historical Archaeology as an Anchor to the Direct Historical Approach of the Prehistorians

The use of archaeology as a means of understanding the Postcolumbian past has followed a path rather typical of investigations of the past throughout the Americas. Archaeology began as a means to understand and interpret the prehistoric contexts of Native peoples, and archaeology of early historical-period sites and protohistoric contexts was used as a starting point for the study of prehistoric peoples (Keegan, 1994; Rouse, 1964 [1939], 1992). While the focus of early archaeology was on prehistory, scholars viewed interpretation of the ethnohistory of the period of contact to be essential to interpretation of preconquest peoples (DeBooy, 1919; Rainey, 1940; Rouse, 1948a, 1948b, 1948c; also see overviews in Keegan [1992, 1994, 1996, 2000], Rouse [1992], Seigel [2005], and Wilson [1993]). Archaeologists focused on constructing definitive chronological sequences aiming at explaining the indigenous Taino and their predecessors. By the early 1970s, when historical archaeological evidence began to be considered in its own right, archaeologists had encountered complexity represented by variation from island to island that

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Fig. 1 Restored ruins of Annaberg Plantation sugar works, St. John. This site was partially restored by the U.S. National Park Service (photograph by D. Armstrong)

Fig. 2 Boca de Nigua sugar estate, Dominican Republic (photograph by D. Armstrong)

belied early efforts to generalize broad cultural traditions for the region (Keegan, 1996, 2000).

These references to the study of the region's prehistory are included because they provide a backdrop to the intellectual environment for archaeological studies in the Caribbean. Major contributions had been made by prehistorians, including refinements of the culture area concept, radiometric chronology, and statistical analysis. Unfortunately, the normative statistics of Irving Rouse's seminal work in *Prehistory of Haiti: A Study in Method* (Rouse, 1964 [1939]) represent the opposite of the type of statistical

Fig. 3 Map of the Caribbean

analysis needed to address the diversity of material culture found in the complex and diverse archipelagoes of the Caribbean.

Not surprisingly, given the early interest in solving problems related to prehistory, archaeologists exploring these issues often adopted the prevalent normative approach of the prehistorians. A classic example of the application of a normative approach, and modal interpretation, to the archaeology of the historical period is seen in early studies of colonial era low-fired earthenware in the Caribbean (McKusick, 1960; Vérin, 1967; Victor, 1941). Many scholars trained in Precolumbian archaeology in the Caribbean began to encounter sites that did not fit expectations either presented by prehistoric ceramic series or European imported wares expected for the colonial era. As with scholars working in North America, they struggled with wares that were not closely associated with either prehistoric or European traditions or that did not correlate directly with objects made in Africa.

In the early 1960s, Handler's observations of modern black potters of Barbados, Antigua, and Nevis documented the presence of black potters in the Caribbean, but their product showed strong influences of European technology (Handler, 1963a, 1963b, 1964; see also Heath, 1990, 1999). Based on the prevalence of low-fired earthenware recovered from Port Royal, Jamaica, Philip Mayes presented a clear definition of what he defined as locally made coarse earthenware, which he correctly attributed to potters of African descent who were producing wares for the domestic markets of Jamaica (Mayes, 1970, 1972:9; Mayes and Mayes, 1972). Mayes's work at Port Royal was soon followed by studies by Duncan Mathewson at the Old King's House in Spanish Town. In this case, local Jamaican earthenware attributed to African pottery traditions was found to be particularly prevalent in the cooking area at this early British-era colonial site (Mathewson, 1972a, 1972b, 1973). These studies defined the presence of a local potting tradition in Jamaica that was based primarily on African potters and technology, a tradition that was in sharp contrast to that found in Barbados. It is important to note that at the same time, archaeologists in North America had not really come to realize the possibilities of pottery traditions of persons of African descent and were still attributing virtually all non-European wares to indigenous producers and defining these wares as Colono-Indian wares (see Noël Hume [1962, 1970] and discussion in Ferguson [1992]). Fortunately, in the Caribbean, the importance of Africans as producers and consumers of locally made pottery was accepted fairly early on, based on the abundance of definitive sites and analyses and the absence of ambiguous contexts. In Jamaica, potters of African descent were well known as historical producers of pottery and continue to produce pottery right up to the present

that makes use of a combination of African ideas and technology along with techniques, such as glazing, associated with European traditions of pottery making.

Still, because of the limits of Rouse's normative modal analyses, archaeologists struggled with interpreting local and regionally produced ceramics (see critique by Hauser and Armstrong [1999]). Some individuals like Gartley (1979), who described a sequence of historical ceramics on St. Croix, employed a classificatory system similar to that employed by Rouse for prehistoric sites. This kind of classification, in a sense, situated the African Diaspora as just another of the many migrations to the island chain that resulted in change in the local ceramic industry. Similarly, when analyzing ceramics from the Harney Cemetery site in Montserrat, Jim Petersen and David Watters attributed human remains to enslaved Africans based on mortuary practices (Watters, 1994) and the association at these sites of wares representing regionally produced earthenware (Petersen and Watters, 1988; Petersen et al., 1999; Watters, 1987; see also Nicholson, 1979, 1990). They correctly attributed the wares to African Caribbean producers and consumers, but, following a Rouse-like modal analysis, they generalized them as Afro-Caribbean wares, belying any regional or temporal variation present in these ceramics throughout island archipelagos (Hauser and DeCorse, 2003).

The same types of interpretive problems were encountered in addressing the contact period in the Lesser Antilles. Until recently, archaeologists continued to generalize the early contact era population as "Carib" without solid evidence from well-defined archaeological contexts. This masked the social and cultural diversity of indigenous groups both within and between islands (Allaire, 1980, 1984, 1991). For a contrasting approach, see Goodwin and Davis (1990), and for perspectives on the topic presented by historians, see Paquette and Engerman (1996). The "Carib" issue is currently being explored by archaeologists on islands like Dominica (Honychurch, 1997) and St. Lucia (Hicks, 2007; Hoffman and Bright, 2004). The results of this research will no doubt reveal new levels of complexity and diversity in lifeways, interactions, and social change that challenge the normative models in which the historical archaeology of this topic in the Caribbean is rooted.

Beginning in the late 1970s and 1980s, when archaeologists began to formally address historical archaeological sites from an anthropological and historiographic perspective, diversity and variation were considered key issues. Cultural anthropologists, historians, geographers, and a new generation of historical archaeologists recognized that economic, social, and cultural "heterogeneity and historicity opened up new vistas, deflecting energies from theoretical simplification" (Trouillot, 1992:22), in a region "where boundaries are notoriously fuzzy" (Trouillot 1992:19). In fact, there is significant variation in the geography of the islands, which includes large mountainous islands with tropical forests to small, low, flat, dry limestone islands and almost everything in between (see discussion of the cultural landscape in Olwig [1995] and Armstrong [2003a]).

Cuban cultural anthropologist Fernando Ortiz provided an interpretive solution to the issue of variability and complexity with his definition of transculturation (Ortiz, 1940, 1995; also see Deagan, 1988; Deagan and Cruxent, 2002a). Ortiz used transculturation to explain the complexity of Caribbean cultural expressions, and the concept has been broadly applied to Caribbean scholarship under definitions of cultural transformation (Armstrong, 1983a, 1983b, 1985, 1990, 1998, 2003a, 2006; Domínguez and Rives, 1995; García Arévalo, 1990, 1998; Mintz, 1974; Mintz and Price, 1976:45) and ethnogenesis (Haviser and MacDonald, 2006). All of these terms, and their underlying theoretical interpretations, emphasize the complexity of cultural interactions in an insular environment and the importance of understanding the diversity of specific cultural, economic, and political historical contexts in which people interacted and actively reformulated the social contexts of local social interaction. For the Spanish Caribbean, Ortiz's work had a decided influence on Kathleen Deagan's studies of Spanish colonial sites, and for the British Caribbean, Douglas Armstrong's plantation studies were strongly influenced by the work of Ortiz along with that of Mintz (1974; also Mintz and Price, 1976).

As Armstrong (2003a:61–68) notes, the transformation model breaks from traditional acculturation and assimilation models based on the "whole culture" concept and assumptions of cultural replacement (see Armstrong [1998:378–381] for a detailed

discussion). Armstrong sums up the importance of models of interpretation that use the concepts of transformation, transculturation, and ethnogenesis in that they "share a common denominator in recognizing that people, free and enslaved, 'dominant' and 'dominated,' labor and management, are active agents of change rather than simple receptors of imposed conditions and restraints" (Armstrong, 2003a:61–62).

In Homage to Forts, Great Houses, and Colonial Effects

While prehistorians made use of contact sites to define the boundaries of prehistory, the era of contact, and the consequences of colonial encounters on local indigenous populations (Wilson, 1990), historians and historical archaeologists, both avocational and professional, spent time documenting the monuments of the colonial-era (Cotter, 1946, 1948). This is a trajectory that has a long basis in Caribbeana. During the eighteenth century, there was a genre of writings that had a tendency to conflate "moral" "natural," and "civil" aspects of history. Included in many of these histories are accounts of monuments to colonial rule and speculation about colonial origins.

As early as 1687, the ruins of historical-period settlements in the Caribbean were observed by British naturalist Hans Sloane. Sloane's two-volume treatise, usually referred to as the "Natural History of Jamaica," published in 1707–1725, painstakingly documented the flora and fauna of Jamaica and several other islands. His collection, which included more than 800 specimens from Jamaica, is the core of what would ultimately become the initial natural history collection of the British Museum. In addition to his definitive writings on the flora and fauna of the Caribbean, Sloane also made detailed observations of historical-period ruins in Jamaica. His observations at Neville la Nueva in Jamaica include details of the ruins of the settlement's Catholic Church. He also noted an interesting earthwork structure—a trench cut across the yard in front of the planter's house at the sugar estate at Seville plantation, which he described as a defensive trench designed to defend the estate from possible attack by the Spanish (Sloane, 1707–1725).

With respect to formal archaeological investigations, much of the early use of archaeological evidence, other than for resolution of problems relating to prehistory and the demise of indigenous populations, focused on the documentation of colonial-era monuments, forts, and planter houses. By the late nineteenth century, when archaeology was really coming into its own as a discipline, the economic and social history of the region was in flux, and many of the region's former sugar, coffee, cotton, and indigo estates were falling into disrepair and ruin. By way of example, in 1859, Jeremiah D. Murphy described the ruins of the Fort James in Jamaica (see discussion in Mayes [1972:9]). At this time, local scientific and intellectual interests were being organized through the creation of local scientific institutions.

A scientific museum, the Natural History Museum of the Jamaica Society, modeled after Sloane's efforts in the study of natural history, was founded in Jamaica in 1830. This organization and its collection later merged with several other scientific organizations and ultimately emerged under the auspices of the Institute of Jamaica (founded in 1879). This institute pursued a broad definition of scientific inquiry related to "natural history," and its early works included publications on archaeological sites of both the prehistoric and historical periods (Cundall, 1915).

The creation of local scientific institutions and associated publication outlets reflects a growing interest in the study of local historical contexts and a shift from the reliance upon distant, imperial, museums and toward a locally based focus on historical interpretation. For much of the region, the institution of slavery and the large-scale cultural and political infrastructure of forts and plantations were giving way to new social and economic systems. Many of the old forts, sites that had once been used as land bases for European sea powers, were being abandoned, and the economic infrastructure for plantation-based slavery and even its replacement "free labor"–based plantation systems were in rapid decline.

Historians and architects occasionally engaged archaeologists to assist in the documentation of these monuments to a colonial way of life. Only later did archaeologists take up the problem directly and shift their focus to the examination of the

African Diaspora in the Caribbean. Hence, one finds significant documentation of the monumental effects of the passing colonial regimes. Many abandoned forts were redefined as public parks, enshrined as historical landmarks, and at least passively excavated in order to reconstruct gun mounts, the materials associated with officer's quarters, and landscapes of grand imperial design and global consequence (Figs. 4 and 5). Not surprising, given the scale of the regional economy and its role in global trade, the forts that defined the various colonial enterprises were, in fact, grand in scale, with places like Brimstone Hill on St. Kitts, El Morro in Puerto Rico, and the Citadel in Haiti literally dominating the cultural landscape, even after they were abandoned. In the years prior to the transfer from colonial rule to local rule, there was a keen interest among sectors of the population in heralding the might of past imperial powers. Hence, historians and archaeologists began a process of documenting and preserving these sites (see Mathewson, 1971).

Fig. 4 El Morro, fortification of San Juan, Puerto Rico. Restored by the US National Park Service (photograph by D. Armstrong)

Similarly, the plantation infrastructure, the complexity and scale of industrial sugar works, and the majestic settings of colonial planter houses (and not the laborer villages and the cultural and political ramifications of the institution of slavery) all received early attention, and while many began a descent to decay, others were set aside and commemorated as significant historic sites in homage to the passing colonial legacy (Fig. 6). In Barbados, the Barbados Museum was founded in 1933 (Cummins, 2004), and in the Jamaica, the National Heritage Trust (JNHT) was established in 1958 to mark and protect significant forts, estate houses and works, and prehistoric sites. In most cases, only later would the definition of significance be expanded to the house sites of the African laborers who made up the majority population but whose residences were less well preserved and visible on the land.

The history of preservation efforts associated with the complex of sites at Seville plantation, Jamaica, illustrates the long-term pattern of interest in protecting both colonial and prehistoric legacies. The site was acquired by the JNHT to commemorate and preserve the planter's residence and works on the British-era sugar estate. Cotter's work to excavate and document the site began in 1937 with the serendipitous discovery

Fig. 5 Brimstone Hill, British hillside fortification, St. Kitts (photograph by D. Armstrong)

Fig. 6 St. Nicholas Abby, planter's residence Barbados (photograph by D. Armstrong)

of a series of early fifteenth-century structures and related monumental architectural elements, including marble carvings associated with the early Spanish settlement of Sevilla la Nueva (Cotter, 1948, 1964, 1970; Cundall, 1915; Goodwin, 1946; Osborne, 1974; Smith et al., 1982; Woodward, 1988, 2006). Cotter's finds encouraged a flurry of interest in Columbian-era sites and included an effort to find two of his ships that resulted in the dredging of a small bay known as Don Christopher Cove.

Columbus had long been an interest of avocational and professional archaeologists. Efforts at addressing early Spanish settlement in the region included investigations by Charles Cotter at Sevilla la Nueva beginning in 1937 (Cotter, 1970), a series of investigations at several early Spanish and English colonial sites by Frank Cundall, director of the Institute of Jamaica between 1916 and 1938, and an array of "Spanish" sites by William B. Goodwin beginning in 1915 and continuing through at least 1938 (Fig. 7; Goodwin, 1940, 1946). Goodwin drew a series of plans of his surveys and excavations in Jamaica and noted a continuing friendly debate between himself and Frank Cundall regarding the cultural attribution of sites as Spanish or English (Goodwin, 1946:10), with Goodwin pushing forward the potential of many sites including those at Seville, Annotto Bay, and Drax Hall, as relating to Spanish-era settlement. In 1946, Goodwin reported on his excavations of several historical-period sites, including an extensive excavation of a cove at Drax Hall plantation, in an effort to locate two of Columbus's ships that are well documented to have run aground on the island in 1503. Despite intensive excavation of 150 test holes and later the dredging of the bay with heavy machinery, no evidence of Columbus's ships was recovered from the bay (Goodwin, 1946). Historian Samuel Elliot Morrison was in communication with Cotter and Goodwin and focused his attention on St. Ann's Bay during his sailing voyages, tracing Columbus's routes as part of an expedition sponsored by Harvard University (Morrison, 1940; also see Parrent and Brown Parrent, 1993; Parrent et al., 1991; Smith, 1987, 1990). Morrison's descriptive account of his expedition was awarded the Pulitzer Prize in 1943.

Through the 1960s and 1970s, monumental historic properties (forts, estate works, and planter residences) continued to be documented by historians, sometimes with the aid and assistance of archaeologists. The primary interest of archaeologists, however, remained focused on defining the complex prehistory of the Caribbean region. The fact that prehistorians ultimately found evidence of insular variation and diversity in the material record, even among affiliated groups and islands, established a precedent for studying cultural complexity that has been critical for the understanding of the historical record. Hence with even a cursory understanding of the insular nature of the region, the diversity of ethnic and social relations, and the distinctive differences in the historical trajectories of each colonial domain and local polity, historical archaeologists regularly found distinctive differences in the material and cultural record from island to island and from colonial domain to colonial domain.

Fig. 7 *Left,* Excavation carried out in the 1930s by William Goodwin in search of Columbus's ships (Goodwin, 1946:47); *right,* Spanish artisan carvings from Sevilla la Nueva, Jamaica (Goodwin, 1946:160; reported by Goodwin as the site of Seville d'Oro)

Underwater Exploration Opens Up the Potential of Archaeology to Interpret History

An exception to the general trend of the pre-1970s era is the detailed and recurrent series of archaeological investigations of the seventeenth-century ruins of Port Royal, Jamaica, that began in the late 1950s through the mid-1970s. Excavators included Mr. and Mrs. Alexi DuPont (in 1954), Edward Link (in 1956), Norman Scott (in 1960), Robert Marx (in the mid-1960s), Philip Mayes (in 1969–1970), and Anthony Priddy (in 1976). Renewed interest in Port Royal began with maritime access associated with the development of the Aqua-Lung and scuba diving. Underwater archaeology allowed access to areas that had been at more than arms length from the archaeologist. Port Royal was well documented as a site that had undergone catastrophic destruction as the result of an earthquake in 1692. With the emergence of maritime archaeology, this site received considerable attention.

The first formal report of underwater research at Port Royal was by Marian C. Link in a very visual and popular article published in *National Geographic* (Link, 1960). This initial study was followed by a nearly continuous string of archaeological studies from 1960 through the early 1990s carried out under the auspices of the JNHT. The most extensive excavations in terms of pure volume were carried out by Robert Marx (1967, 1968a, 1968b, 1968c, 1973), who used dredging techniques that were by today's standards extremely crude and brutal to the site. Noteworthy among the contributions of more-refined studies of the site (on land and in the water) are the work of Philip Mayes (1972; Mayes and Mayes, 1972) and teams of scholars from Texas A&M's Institute of Nautical Archaeology (INA), under the direction of Donny Hamilton (Figs. 8 and 9).

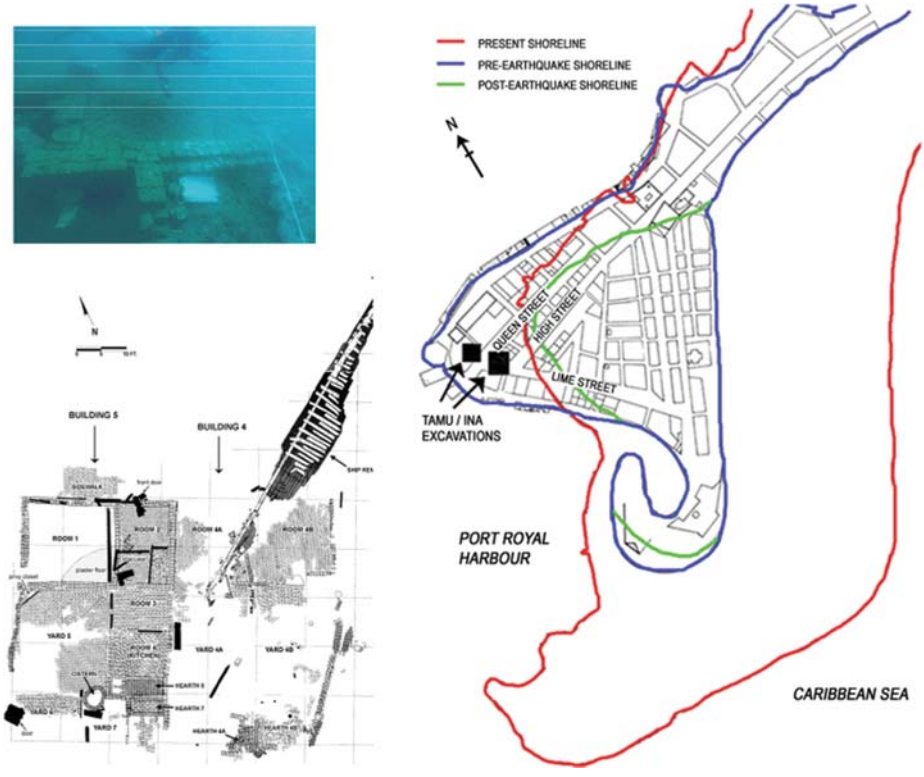

Fig. 8 Map of Port Royal and plans and photographs of underwater excavation (Buildings 4 and 5). The excavation of these building yielded significant quantities of artifacts found intact beneath walls that had collapsed during the 1692 earthquake. The pewter plates illustrated in Fig. 9 were among the items recovered from Building 5, Room 2 (courtesy Donny Hamilton, Institute of Nautical Archaeology, Texas A&M University)

Fig. 9 Set of pewter plates, Port Royal (courtesy Donny Hamilton, Institute of Nautical Archaeology, Texas A&M University). These plates are among dozens of pewter items found in Building 5 at Port Royal during the INA excavations. Insert shows touch mark indicating both the probable pewter artisan and the owners. Simon Benning (the pineapple bracketed by the initials S and B indicates manufacture by the Port Royal pewterer Simon Benning). The initials are thought to indicate ownership by Nathanial Cook and his wife Jane (they owned the property prior to the earthquake; Hamilton, 2000; Pawson and Buisseret, 1975:105, 183, and http://nautarch.tamu.edu/portroyal/research.htm#SIMON)

The studies by Hamilton and his students represent an important shift in methodological and technical expertise, with resulting reports providing some of the most refined details in material and spatial analysis for the region (Hamilton, 1986, 1988, 2006; Hamilton and Woodward, 1984). Reports and publications from the studies conducted by the Institute for Nautical Archaeology at Texas A&M University (INA) resulted in details on material use and social interaction in this important eighteenth-century port town (Brown, 1996; Darrington, 1994; Dewolf, 1998; Fox, 1998; Franklin, 1992; Gotelipe-Miller, 1990; Hailey, 1994; Heidtke, 1992; McClenaghan, 1988; Smith, 1995; Trussel, 2004; see also Downing and Harris [1982] for underwater studies of Bermuda and Leshikar-Denton [1991] for studies of the Cayman Islands).

While no major synthesis of this work has yet been published, the INA projects have the distinction of not only resulting in a series of detailed reports but also in their wide dissemination via well-maintained Web links on the Internet (http://nautarch.tamu.edu/portroyal/). This Web site is important, as it presents both summary and detailed information relating to decades of research that has been made available to all, including those residing within the region. The findings from Port Royal represent a wealth of information on an important seventeenth-century English colonial settlement; but, unfortunately, these findings have not been thoroughly incorporated into studies from other regions, particularly North America. As Hamilton (2000) points out, the "underwater excavations from Port Royal have resulted in remarkable parallels and even more interesting contrasts with contemporaneous English colonists in North America" (http://nautarch.tamu.edu/portroyal/PRhist.htm). We find this observation to not only be true for the Port Royal study but more generally for historical archaeological studies of the Caribbean region. Moreover, given the role of the Caribbean as an intersection for global interaction, the findings from the Caribbean are useful on a broader, global scale for understanding cultural interactions and material use over the past 500 years.

Transitions in the Study of Historical-Period Cultural Contexts in the Caribbean

One of the biggest problems faced by developing nations and local populations looking to explore their past and illuminate their cultural history has been the establishment of formal educational institutions beyond the bounds (control) of their colonial holders or limitations of North American scholarship. Schools of higher learning were founded in Cuba as early as 1728 (University of Havana) and in Puerto Rico by 1900 [Escuela Normal Industrial (Normal Industrial School), now the University of Puerto Rico], but, for much of the region, discourse on history and culture was limited by the combination of educational systems defined externally by a colonial polity, and by scholars trained and hired from abroad. The University of the West Indies emerged as a regional center of learning for the British colonial sphere with a campus at Mona in Jamaica in 1948, with subsequent campuses in Trinidad and Barbados and extramural programs throughout the archipelago.

The era after World War II saw the emergence of expanding nationalism and labor politics with a series of newly independent nations as well as a regional identity that transcended specific independent

islands and old colonial ties. Haiti achieved its independence in 1791, with the Dominican Republic following in 1844, and Cuba in 1902. For the most part, however, the region (including those that had declared themselves sovereign) remained under colonial, or at least external, control until the independence movements of the post–World War II era. The late 1950s and early 1960s saw the emergence of nation states, including a truly independent Cuba following its revolution in 1959, and negotiated independence for a large number of island nations including Jamaica and Trinidad (1962), Barbados (1966), Dominica (1978), St. Kitts (1983), and Nevis (1998). Even with the trend toward independence, many islands retained formal colonial ties, as with the French islands of Martinique and Guadeloupe and several of the Dutch islands.

Not surprisingly, the era of transition from colonial rule to nationhood was also an era in which archaeological investigations began to be organized with a decidedly new agenda. Research continued to be carried out by researchers based in North American academic institutions, but beginning in the early 1960s, scholars and persons interested in the study of archaeology in the Caribbean region gathered in the islands with the specific intention of solving local problems. The tradition of biannual meetings, known today as the International Congress of Caribbean Archaeology (IACA), was initiated by local archaeologists with a meeting held at Fort-de-France, Martinique, in 1961. This conference was sponsored by the local Société d'Histoire de la Martinique, and in keeping with traditions of archaeology of the era, the conference dealt primarily with issues of island prehistory, with papers presented by a mix of amateur archaeologists from the region and professional scholars, mostly from North American universities. The vast majority of attendees were members of the local historical society. The only discussion of historic contexts was a series of papers addressing the historical-period "Carib." These included translations of Breton's dictionary by Jacques Petitjean-Roget (1963), a presentation on the prehistory and "Carib" of Martinique by the Reverend F.R. Pinchon (1963), and a subsequent debate among participants that included Ripley Bullen, William Haag, Fred Olsen, Robert Pinchon, and Irving Rouse (Bullen et al., 1963:85–95). Interestingly, the "Carib" debate was cut short by a field trip to see the "women potters of Ste. Anne" demonstrate local coiled-pottery manufacture. Hence, though not formally reported as such, the first session of the first meeting was punctuated by a trip to observe African-descendent pottery-production techniques and traditions that were still operative in mid-twentieth-century Martinique (Fig. 10; see also Victor, 1941).

From the early 1960s until the IACA meetings in the Dominican Republic in 1981, the primary focus of papers at the Caribbean conference continued to focus on island prehistory, with a few papers addressing ethnohistoric issues and maintaining an interest in the early historic "Carib" population of the Lesser Antilles. The first session dedicated to "Ethnohistory and the Historic Period" took place at St. Kitts in 1979, but the focus continued to be on the "Carib" and ethnohistory of the region as a means of understanding the region' s prehistory. That congress did feature a trip to the former British military fortification at Brimstone Hill, an event that was carried out in deference to a local amateur archaeologist and historian and the sponsorship of the Brimstone Hill Society.[1] Nearly, two decades later, Brimstone Hill became the focus of archaeological

Fig. 10 Locally produced earthenware, Martinique pottery, St. Anne, Martinique (photograph by Mark Hauser)

[1] The Brimstone Hill Society was founded in 1965 and is now known as the Brimstone Hill Fortress National Park Society. It was established as a means to protect the site and to facilitate its restoration. Their long-term efforts ultimately led to the creation of Brimstone Hill Fortress National Park and the designation of this historic property as a UNESCO World Heritage site.

investigations in a manner long hoped for by the local historical society (Schroedl and Ahlman, 2002).

By the late 1970s and early 1980s, archaeology was undergoing a transition that rapidly embraced historical archaeological sites and shifted to the point where archaeological studies of historical contexts, particularly those related to the African Diaspora, came to make up a significant proportion of the papers and intellectual discourse at the Caribbean meetings. This shift was mirrored in the depth and breadth of historical archaeological projects and publications between 1980 and the present.

By 1981, the focus of archaeology in the Caribbean had expanded to include the broader dimensions of historical archaeology. As we have shown, topics like forts, colonial settlements, and maritime sites had long been research themes, but the tendency was to highlight colonial and imperial contexts. The first IACA session to specifically address historical contexts relating to colonial settlements and plantation contexts associated with the African Diaspora took place in the Dominican Republic in 1981. This session included papers relating to the African Diaspora as well as a series of studies that explored contact sites in Haiti and the Dominican Republic. Archaeological studies dealing with the African presence in the Caribbean were presented by Douglas Armstrong (1983b: 431–442) and Merrick Posnansky (1983:443–450). Armstrong's paper presented initial findings from archaeological explorations of the enslaved laborer village site at Drax Hall plantation in Jamaica. Posnansky's paper presented an overview of the potential for the use of historical archaeology to address questions relating to the African Diaspora in the Caribbean; Charles Fairbanks and Rochelle Marrinan (1983:409–417) presented their research at Puerto Real in Haiti; Kathleen Deagan on the relationship between Spanish Florida and historical-period Spanish settlements in the Caribbean (Deagan, 1983:419–429; see also Goggin's [1960, 1968] studies of early Spanish olive jars and majolica; and James Eicholz (1983:451–457) reported details of an early Spanish colonial lime kiln in the Dominican Republic. From this point forward, historical archaeology would be considered a "mainstream" focus of research within the Caribbean community.

Continuing on the theme of exploring colonial settlements, the Dutch trading center and port town at St. Eustatius was explored by Norman Barka in the early 1980s (Barka, 1985, 1990, 1991, 1996; Dethlefsen et al., 1982). These studies examined the waterfront associated with the eighteenth-century Dutch trading center and also began the process of documenting the distribution of domestic sites and plantations across the island. The archaeological studies initiated by Barka and his team were followed up under the leadership of Netherlands Antilles archaeologists Jay Haviser and are currently being carried out by the St. Eustatius Center for Archaeological Research under the direction of Grant Gilmore (http://www.secar.org/).

The Columbian Quincentennial Rush

In anticipation of the 500th anniversary of Columbus's arrival in the New World and the dramatic impact of contact and subsequent European colonial interaction and its global consequences, the Caribbean region was the focus of renewed and invigorated archaeological inquiry exploring both sides of the temporal and cultural demarcation represented by the Columbian encounter. Rather than simply celebrating this temporal marker of Columbus's arrival, as per 400th anniversary commemorations a century earlier, scholarship surrounding the Quincentennial was far more critical and reflected on the consequences of social interactions. This new generation of research made extensive use of refined field methods and culturally defined theoretical perspectives to find and examine the evidence. For archaeologists, the foci of investigation ranged from the points and repercussion of contact and sites associated with the "ships of discovery" to a broad range of projects looking not only at European arrival but of the consequences of contact and the array of social interactions that followed, including the decimation of indigenous populations and the impact of the transatlantic slave trade. This critical reflection on the impacts of social interaction is emboldened in the titles of two books, William Keegan's *The People Who Discovered Columbus* (Keegan, 1992) and Irving Rouse's *The Tainos: Rise and Decline of the People Who Greeted Columbus* (Rouse, 1992; see also Milanich and Milbrath, 1989).

The complexity and impact of Hispanic/indigenous interactions is outlined by Kathleen Deagan and her students' research at Puerto Real in Haiti (Deagan, 1995; Ewen, 1990a, 1990b; McEwan, 1995; Reitz and McEwan, 1995). The investigation of Puerto Real was inspired by Dr. William Hodges, an amateur archaeologist who discovered the site and encouraged its archaeological investigation (Hodges, 1995). The project identified the site of the first Spanish settlement in the Americas as well as the nearby site of En Bas Saline (Deagan, 1995). The Puerto Real study is an important source of information on early Spanish attempts at settling in the New World. The settlement at Puerto Real was short-lived but important both in terms of understanding the early period of European presence in the New World and the nature of the encounter of three cultures—indigenous Americans, Africans, and Europeans—and the early development of multicultural identities (Deagan, 1995:455–456). The Puerto Real project itself was cut short because it was problematic carrying out research in a nation that was undergoing political and economic stress. The findings, however, provided an initial understanding of early colonial interactions in the Caribbean and were of tremendous value for later study by Deagan and José María Cruxent at La Isabela (Deagan and Cruxent, 2002a, 2002b). Hopefully archaeologists will one day return to the site of Puerto Real and follow up with an even more detailed investigation of this important early sixteenth-century site.

Kathleen Deagan followed up on her studies of Puerto Real in Haiti (Deagan, 1983, 1987, 1990, 1995) with studies of La Isabela in the Dominican Republic. The La Isabela project was initiated in 1987 and carried out by Deagan in partnership with José María Cruxent, a long-standing contributor to the study of the prehistory and ethnohistory of the Caribbean region. Unfortunately, the site had undergone a series of prior excavations beginning as early as 1891 and 1892, and then again in 1945 (Palm, 1945, 1952; see similar reconnaissance of reported Spanish period sites in Jamaica by Goodwin [1946]). Unfortunately, the only surviving records of the earliest efforts at La Isabela are the destruction of significant portions of the archaeological site. Hence the recovery of information from the site by Deagan and Cruxent should be considered all the more remarkable.

The archaeological investigation of La Isabela provided an in-depth examination of the first successful colonial European settlement in the Americas (Deagan and Cruxent, 2002a, 2002b; see Pantel et al. [1988] for studies of early Spanish colonial sites in Puerto Rico). This study chronicles the details of life and death in an early colonial settlement and addresses issues ranging from house and settlement design to diet and material use. While inspired by the Quincentennial observances, Deagan and Cruxent combined archaeological evidence and historical accounts to tell the story not only of the European settlers but also of the social and economic systems that were created and the conditions faced by both the indigenous peoples and the colonists. Columbus had modeled the settlement's economic structure on the *factoría* system, where settlers would link into existing trading networks and exchange goods with indigenous populations in the region. The study identified the presence of the satellite settlement at Las Coles. This site, located a little more than 1.5 kilometers from La Isabela, included a series of structures including mills and industrial works, and suggests the presence of a complex of sites that provide a more comprehensive understanding of the settlement than had been previously known. The presence of this site also suggests that the selection of La Isabela and related settlement areas was consistent with historical records projecting their economic objectives. The spatial layout of the site is especially interesting. Rather than conforming to expectations of a Spanish grid pattern, the town emphasized fortification from external threats (from the indigenous population) and made use of existing geographic and cultural features in the landscape to project authority. Deagan and Cruxent suggest that this town layout is consistent with the ideas of Italian architect Francesco di Giorgio Martini (Deagan and Cruxent, 2002a).

Maritime archaeology also drew upon the world's attention to the 500th anniversary of Columbus's arrival to engage in a search for several of his ships. In Jamaica, there was a renewed effort to find remains of two ships that Columbus ran aground in Jamaica in 1503 (Parrent and Brown Parrent, 1993; Parrent et al., 1991). When conducted, the survey actually focused on the Reader's Point section of the bay. While Columbus's ships were not recovered, these projects did identify a wide array of shipwrecks and led to the significant recovery of

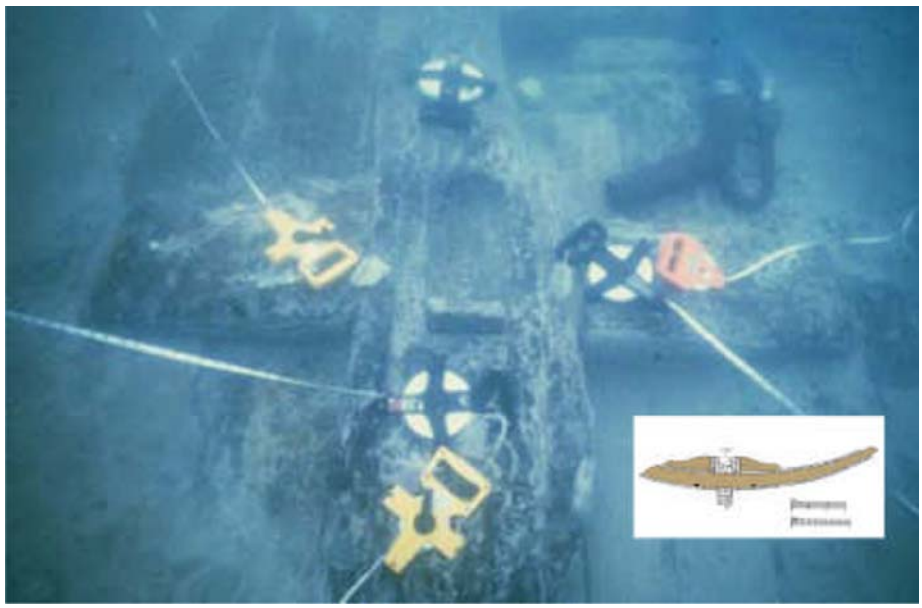

Fig. 11 Excavation of Reader's Point wreck by Gregory Cook. Detailed analysis indicates that this nineteenth-century merchant ship had trading ties to North America and that was crippled and perhaps scuttled due to a crack in its keel (courtesy Gregory Cook)

a nineteenth-century trading sloop at Reader's Point in St. Ann's Bay (Fig. 11; Cook, 1994).

In observance of the Quincentennial, the Society for Historical Archaeology and the Advisory Council on Underwater Archaeology held their joint annual meeting in Kingston, Jamaica, in January of 1992. This conference featured presentations on an array of Caribbean research projects on topics ranging from issues of culture contact, underwater archaeology, and plantation studies. The conference included presentations on and visits to sites at Accompong Town, Seville plantation, the Old King's House in Spanish Town, and Port Royal. While one goal was to highlight the kinds of archaeologies that have taken place in the region, a more important result of this conference was the explosion of archaeological research in the Caribbean that followed.

The African Diaspora Explored: Plantations and the Study of Slavery and Its Consequences

The initial studies of locally produced earthenware that were completed as part of more broadly defined colonial-period studies at Port Royal and the Old King's house in Jamaica (Mathewson, 1971, 1972a, 1972b, 1973; Mayes, 1970, 1972) led to the realization that archaeology could provide significant information on the majority laborer population in the Caribbean. Persons of African descent and the cultural landscapes represented by plantations quickly emerged as a significant focal point for Caribbean research. Geographer and historian Barry Higman organized excavations at the well-documented ruins at Montpelier (Higman, 1974, 1975, 1976, 1998; Riordan, 1973), while Jerome Handler and Frederick Lange initiated a project to locate village sites formerly occupied by enslaved laborers in Barbados (Handler and Lange, 1978, 1979). Handler and Lange had difficulty recognizing discrete ruins of slave settlements at plantations in Barbados and shifted their focus to the reconnaissance of the material culture associated with human remains found at the Newton plantation slave cemetery (Corruccini et al., 1982; Handler and Lange, 1978). A strength of this work was the use of detailed documentation to guide the research. Handler and Lange were frustrated in their efforts to define cultural material directly attributable to persons of African descent. Archaeologists, however, quickly adjusted their perspectives and expectations of material culture to accept the fact that sites associated with persons of African descent in the Caribbean would contain a mix of local wares with relatively high proportions of materials manufactured in Europe and available for consumers in the world marketplace.

Armstrong's study of Drax Hall and Seville plantations in Jamaica began with archival research that made use of detailed maps and estate plans to help locate settlement areas (Armstrong, 1983a, 1985, 1990). Moreover, expectations for material evidence included not only the presence of definitive African Jamaican-produced wares but also the utilization of significant proportions of imported wares made in Europe and globally. The archaeological investigation of Drax Hall plantation examined both enslaved laborer and planter/manager living contexts and focused on the bilateral expressions of continuity and change within African and European materials recovered from laborer's housing and the planter's residence (Armstrong, 1990). Material use patterns were shown to reflect aspects of continuity linked to each group's respective heritage as well as in situ, locally defined changes based on social interactions and changing patterns of material availability, through time, within a transforming Jamaican society (Figs. 12 and 13).

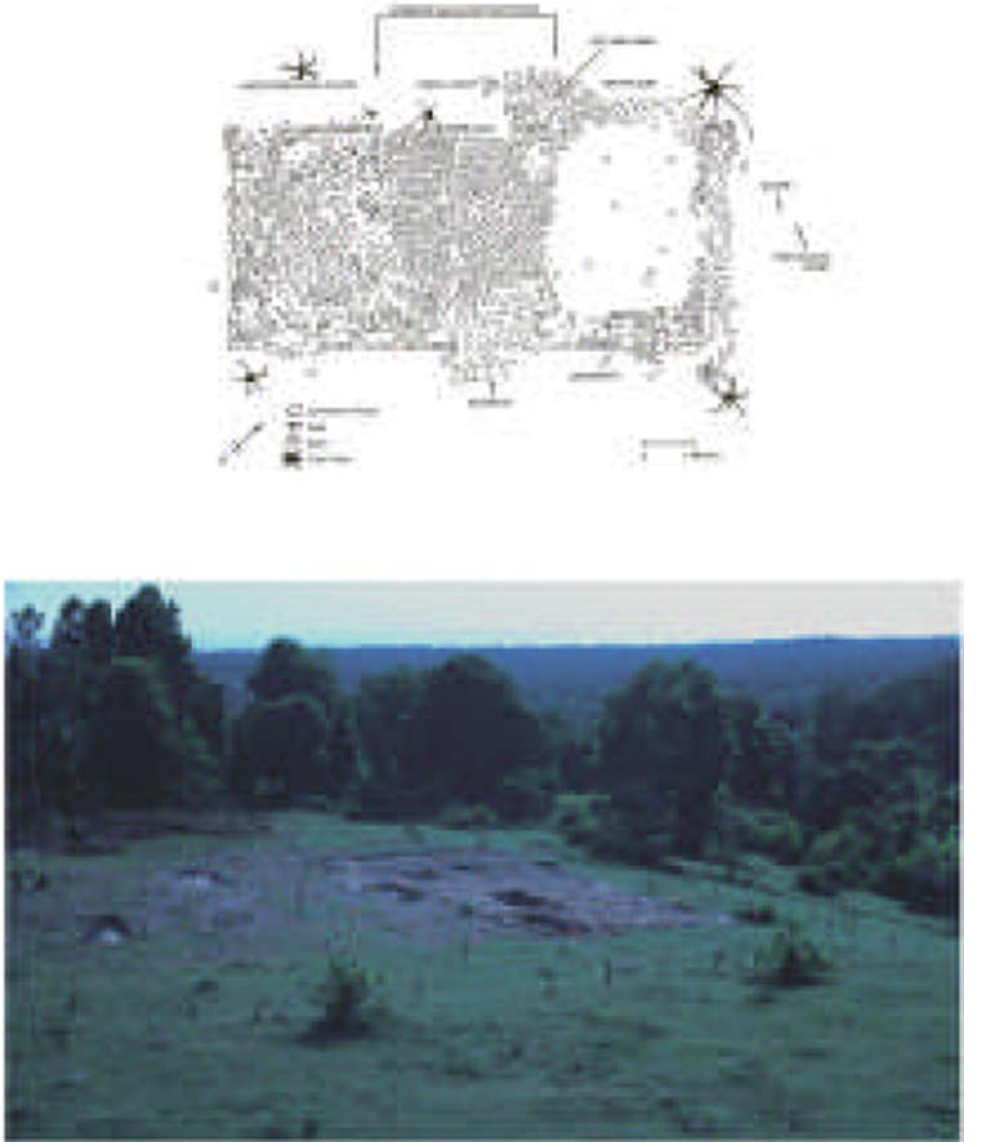

Fig. 12 Excavation and archaeological site plan of an enslaved laborer's house-yard compound at Drax Hall, Jamaica. Excavated in 1981, this site is reported in Armstrong (1990a; photograph by D. Armstrong)

Fig. 13 Gaming pieces, Seville African Jamaican settlement, early village. Broken pottery carved into disks and reused in gaming pieces in games of chance (photograph by D. Armstrong)

The Drax study also explored changing patterns in the use of the plantation landscape associated with the location of the housing of both planter and slave during and after emancipation (Armstrong, 1991a, 1991b, 1991c:56). At the time the Drax study was carried out, Armstrong was in communication with Barry Higman and had an understanding of the materials that had been recovered from that site but which would not be published in detail (see Higman, 1998). Armstrong was particularly impressed by Higman's depth of historiographic expertise and the potential of the integration of archival research into the interpretation of the archaeological record. Hence, the Drax Hall study made extensive use of the rich archival record for the island and for the site complex at Drax Hall. This was particularly useful in documenting changing land use over time on the estate and in the detailed study of diet. The Drax Hall dietary study made use of extensive lists of dietary provisions found in the estate accounts and used these records to explain a shift in the faunal assemblage after emancipation, when such provisions were no longer provided by the estate (Armstrong, 1990; Reitz, 1990). These data provided strong evidence for dietary hardships for the newly "freed" African Jamaican laborers on the estate.

While Armstrong's (1990) and Reitz's (1990) studies concentrated on the domestic space of the house yard on a Jamaican plantation, archaeological studies of Galways plantation in Montserrat by Conrad Goodwin and Lydia Pulsipher concentrated on the implications of plantation management and design by focusing on the controls represented by the layout of the estate and the management of time (Goodwin, 1987; Pulsipher and Goodwin, 1982, 1999). The materials excavated from slave houses at Galways were studied by Jean Howson (1995). As part of this study, Howson published a critique of the archaeology of plantation slavery that encouraged archaeologists to more fully explore social relations in their analysis of material culture (Howson, 1990). In a collaborative ethnohistorical study of the Galways community, Lydia Pulsipher (1991) carried out detailed studies of houses and yards in the vicinity of the plantation. Combining findings from both oral history and archaeological studies, this research focused on ways in which enslaved laborers took the most marginal pieces of land on plantations, began to grow their own crops, and eventually expanded production to sell surplus crops on the market (Pulsipher, 1990, 1994). It is fortunate that detailed records were recorded for both Galways plantation and the late-twentieth-century house sites of the descendent population, as the site and the surrounding area were destroyed by the eruption of Soufriere Hills Volcano in 1995.

By the late 1980s, archaeological explorations of plantation and broader Diasporan contexts had been increased dramatically in both scale and scope. Armstrong carried out excavations at Seville plantation, Jamaica, and continued to publish on Jamaican house yards (Armstrong, 1991b, 1991c, 1992, 1998; Armstrong and Kelly, 2000). While initially focused on two temporally and spatially discrete African Jamaican laborer contexts, the archaeological investigation of Seville sugar estate was expanded to contrast the finds from laborer contexts with those from three levels of plantation management (Armstrong, 1998): shifts in utilization of the plantation landscape (Armstrong and Kelly, 2000), house-yard burial practices (Armstrong and Fleischman, 2002), and the material expressions of East Indian contract laborers (Armstrong and Hauser, 2003, 2004).

The plantation as an institution and the economy that supported and depended on it have been the most studied aspects of Caribbean historical archaeology. Whether as an anchor of Diasporic

research or a point of entry into understanding the globalized world, the centrality of the plantation as a unit of analysis is crucial in understanding the development of historical archaeology. By far the greatest amount of plantation archaeology has occurred in the Anglophone Caribbean, specifically in Barbados (Handler, 1963a, 1963b, 1964, 1965, 1972; Handler and Lange, 1978, 1997; Loftfield, 2001), the Bahamas (Farnsworth, 1992, 1996, 1999, 2000, 2001; Wilkie, 1995, 2000a, 2000b; Wilkie and Bartoy, 2000; Wilkie and Farnsworth, 1999, 2005), Nevis (Hicks, 2007; Meniketti, 1998; Platzer, 1979), Montserrat (Petersen and Watters, 1988; Pulsipher, 1986, 1991, 1993; Pulsipher and Goodwin, 1999; Watters, 1987, 1994), Antigua (Handler, 1964; Murphy, 1996, 2001), and most significantly, Jamaica (Agorsah, 1992, 1993; Armstrong, 1983a, 1990, 1991a, 1991b, 1991c, 1992; Armstrong and Fleischman, 2002; Armstrong and Hauser, 2004; Armstrong and Kelly, 2000; Bonner, 1974; Delle, 1999, 2000a, 2000b, 2001; Delle et al., 2000; Farnsworth, 1992; Goucher, 1990; Hamilton, 2006; Hauser, 2001, 2006, 2008; Hauser and DeCorse, 2003; Higman, 1975, 1976, 1986a, 1987, 1996, 1998, 1999, 2005; Mathewson, 1972a, 1972b, 1973; Mayes, 1972; Pasquariello, 1995; Priddy, 1975; Reeves, 1997; Robertson, 2005).

Archaeologists have addressed issues related to the plantation economy and plantation society at sites throughout the Caribbean region (see Ortega, 1980, 1982; Ortega and Fondeur, 1978a, 1978b, 1979). Archaeologists have examined industrial works and production systems associated with mining and sugar production (Arrom and García Arévalo, 1986) as well as the presence of maroon (*cimarrón*) sites (Arrom and García Arévalo, 1986; García Arévalo, 1986). In Puerto Rico, several sugar plantations have been studied, but in contrast to the remainder of the Caribbean, very little attention has been paid to the African populations of that island (Armstrong, 2006).

Long a Caribbean trading and provisioning hub, Cuba became a center for plantation slavery rather late but became the largest producer of many crops, including sugar, in the nineteenth century, following the revolution and independence of Haiti and the gradual cessation of the slave trade and abolition of slavery in the British, French, Danish, and Dutch colonial holdings (Armstrong, 2003a; Barka, 1991; Righter, 1990).

Studies of plantations and plantation society in Cuba note not only similarities in the overall economy of slavery but also distinct differences in the structure of plantations and their impact on the people bound to the system of slavery (Curet et al., 2005; Domínguez, 1978, 1981, 1984, 1991; La Rosa Corzo, 1988, 1991, 2003; La Rosa Corzo and González, 2004; Lugo Romera and Menendez Castro, 2003; Prat Puig, 1980; Singleton, 2001, 2006). Within Cuban slavery, there is a distinct contrast in the organization of plantations, particularly with the emergence of large-scale barracks associated with massive mid-nineteenth-century plantations organized around large-scale works powered by steam engines. While this technology is present in the later stages of the development of plantations throughout the Caribbean, including Jamaica, Barbados, and even on small islands like St. John in the Danish West Indies, the use of this technology was not adopted on the other islands to the same scale as in Cuba. In part, this was because Cuba was essentially building new estates and still importing slave and contract labor, while other islands were adjusting newly freed labor to older industrial works. Hence, planters on other islands were neither willing nor able to invest the capital needed to transform the industrial works of their estates. Some notable exceptions include the island-wide, steam-powered sugar works that were built in the early twentieth century on St. Kitts and the large-scale sugar works at estates such as Worthy Park in Jamaica and Newton plantation in Barbados.

In addition to studies of sugar estates, recent studies by Theresa Singleton in Cuba have focused on coffee estates and diverse forms of plantation management and mechanisms designed to control (from influences both inside and outside the estate) enslaved labor communities in Cuba (see Singleton and Souza, this volume). The presence of a 3-m-high wall around the laborer quarters at Santa Ana de Viajacas (today called Cafetal del Padre) (Singleton, 2001) suggests a significant investment in the construction of a feature linked not with industrial production but rather on isolating and controlling the laborer population (Singleton, 2001, 2006). While the wall enclosure enables a degree of control over the enslaved population, Singleton suggests that this power was not complete. The presence of

material culture that was purchased by the enslaved and sometimes reworked could be read as agency on the part of enslaved in order to shape their material world (Singleton, 2001).

Plantation studies have been carried out in the Netherland Antilles (Figs. 14 and 15; Barka, 1996; Delle, 1989, 1994; Haviser, 1985:11, 1999a, 1999b, 2005a, 2005b; Haviser and DeCorse, 1989; Heath, 1988, 1999), the former Danish West Indies (Armstrong, 2003a, 2003b; Armstrong et al., 2005; Gartley, 1979; Hauser and Armstrong, 1999; Lenik, 2004), and the French Antilles (Delpuech, 2001; Kelly, 2002, 2004; Kelly and Gibson, 2003). These studies have emphasized the distinct parameters associated with the local historical context and the relationship between events affecting each population and the material expression recovered from the archaeological record. Rather than sharing one regional history, each island and even local populations within islands have histories that are unique to the local experience. Kelly's studies of plantations on Guadeloupe show the importance of understanding the impact of local historical contexts. For example, in the case of sites on Guadeloupe vs. Martinique, each island, while essentially under French colonial control, had distinctively different experiences associated with the French Revolution (Kelly, 2002, 2004). The planters of Martinique turned the island over to management by the British, who maintained slavery and the plantation economy, while the enslaved laborers of Guadeloupe were declared "free," albeit still bound to the land and the state and were only later re-enslaved in 1802. Not surprisingly, the cultural landscape of each island is very different.

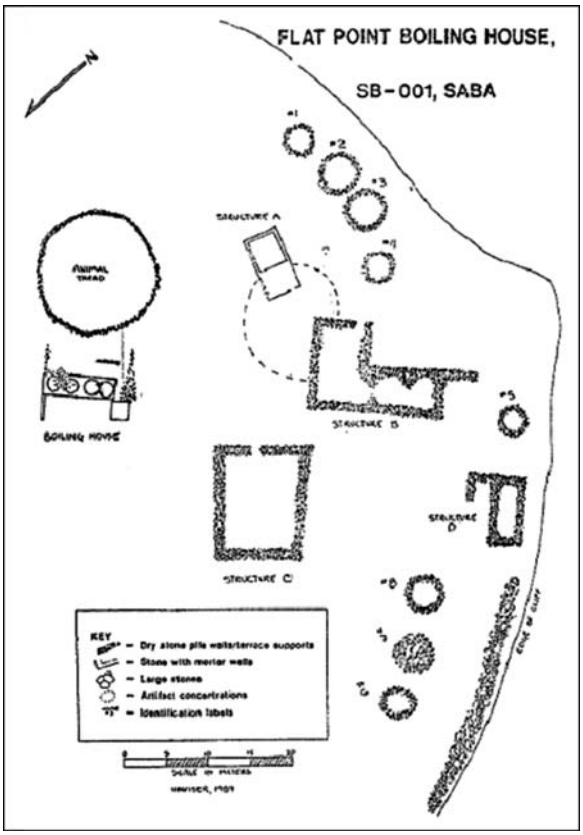

Fig. 14 Excavation plans for boiling house and sugar works, Flat Point, Saba, Netherlands Antilles (Haviser, 1985; courtesy Jay B. Haviser)

Several islands were managed by more than one colonial power. St. Kitts was for a time divided into three sections, with the island's main town and center controlled by the French and the two ends controlled by the British. Hence, the organization of space and layout of estates varies according to where you are on the island and which colonial power had control at the time estates were established. This particular island history has enabled scholars to draw out questions about the degree to which colonial control effectively mediated emergent European capitalism and how these are resident in contemporary and archaeological landscapes (Hicks, 2007). The construction, the layout, and the design of estates throughout the Caribbean reflect changes in technology and social ideals, including the source, scale, and treatment of labor (free and unfree).

With respect to the plantation system and its relationship to landscapes of power and economic control, the starting place for most scholars working on plantation sites in the Caribbean was the series of industrial works and planter's residences that represent the monumental architecture of this particular society. Probably the most well-documented study of the ways in which European colonialism and capitalism became inscribed on the landscape comes from James Delle's work on Blue Mountain coffee plantations in Jamaica (Delle, 1998, 1999, 2000a, 2000b, 2001; Delle et al., 2000). In this study, Delle set out to define the ways in which European ideologies interwoven in emergent

Fig. 15 *Left,* red-and-gold-enameled porcelain from the eighteenth-century Danish East Indies trade; *right,* orange-paste Moravian (American) slipware with yellow, red, and green slip decoration from eighteenth-century contexts at Cinnamon Bay, St. John, U.S. Virgin Islands (formerly Danish West Indies). Items shown reflect the specific trade and cultural relationships found at individual sites in the Caribbean. These materials illustrate ties that link the East Indies to the West Indies and Europe and North America to the Danish West Indies (photographs by D. Armstrong)

capitalism were inscribed on these colonial landscapes. Arguing against approaches in economic history where economic efficiency was the primary measure of analysis (Clement, 1997; Higman, 1986a, 1986b, 1987, 1988), Delle joins a series of scholars in demonstrating the ways in which European capitalism regimented the daily lives of colonial subjects (Delle, 1999, 2000a). While this project has been criticized at various points for its top-down approach (Wilkie, 1995; Wilkie and Bartoy, 2000), Delle highlights the need to not leave the "global" and its concomitant ideologies left unexplored.

Geographical Information Systems (GIS) are increasingly being used in combination with global-positioning-systems (GPS) survey techniques to refine mapping of sites and regions. A recently completed GIS study of St. John, formerly part of the Danish West Indies, identified all of the historical-period sites represented on maps of the island dating to 1780 and 1800. This information was used to examine the relationship between land consolidation and growth of plantations in more verdant sugar-producing lands on the island. The more arid lands were abandoned by sugar planters and acquired by a growing number of free blacks, who in turn used these lands to establish themselves as first-class Danish citizens while growing provisions and engaging in a variety of maritime trades and cottage industries. These activities were supported by commerce on St. John and neighboring islands, including the rapidly growing port town of Charlotte Amalie on St. Thomas (Armstrong, Hauser, Knight, and Wild, 2007).

Advocating a "ground-up" approach is the work of Paul Farnsworth and Laurie Wilkie in their studies at Clifton plantation on New Providence in the Bahamas. In this research, Wilkie and Farnsworth are far more interested in the ways in which an emergent community developed within the context of a partially articulated Atlantic world economy. Their argument rests primarily on the juxtaposition of day books with archaeologically recovered material culture. Specifically they focus on the ways in which access to local and regional markets enabled enslaved Africans on Providence Island to actively consume material culture, which in turn shaped their everyday life (Wilkie and Farnsworth, 1999).

They have pointed to the complexity of African identities in the New World and have called for "multiscalar explorations" of the construction of New World Creole identities. They have used their study of the Clifton plantation on New Providence in the Bahamas to build upon the potential of African Diaspora archaeologies to operate "at multiple spatial scales, ranging from the household to the quarters to the plantation" and beyond (Wilkie and Farnsworth, 2005:3).

What is interesting about both studies is that they are essentially describing the similar structures of inequality during the same time period manifest in the same empire. Indeed whether we are describing an "actor-up" or a "top-down" approach, both studies highlight the need in the Caribbean context of a multiscalar approach where archaeology is used to mediate global forces and local particularities. Indeed, 1980s and 1990s Diaspora scholarship in the Caribbean has highlighted one of the major questions dealt with in historical anthropology. Was colonialism a mechanism through which Europe disciplined the producers and consumers of industrial commodity, or was capitalism a mechanism through which colonial subjectivities were regimented?

Beyond the Boundaries: New Problems and Diverse Directions in Research

When Denis Diderot published his encyclopedia illustrating industrial production systems, including an entry on *sucre* (sugar), his representation of technology provides no mention of the slave system that brought about their existence or the conditions of labor involved in the manufacturing process (Diderot, 1993 [1758]:15:608, Plate I). Illustrations of plantations, works, and other permutations of the institution of slavery are abundant throughout the islands for the period of slavery (see collection of historical prints compiled by Jerome Handler and Michael Tuite at the University of Virginia; http://hitchcock.itc.virginia.edu/Slavery/index.php). However, representations of the estate and works depict clean landscapes, without smoke from the fires of industry and without presentation of the sweat and struggle of laborers in the fields and industrial works of the estate. Indeed, perhaps partially as a result of these "cleaned-up" illustrations of historical interactions, early plantation archaeology in the Caribbean assumed that it would be difficult to retrieve material remains from plantation life other than those of the industrial complexes or sites of economic control (see Handler and Lange, 1978). However, as illustrated by the array of studies that have been completed, evidence of nearly all aspects of Caribbean life, including the remains of small-scale wattle-and-daub structures associated with slave and laborer households, has been excavated and interpreted.

One area of particular interest over the years has been the study of burial practice. Handler and Lange's (1978) study of Newton plantation cemetery in Barbados illustrated the tremendous potential of gaining details pertaining to life, conditions of life, and death of enslaved individuals. Examination of burials is an excellent means of learning intimate details about individuals and communities (Armstrong and Fleischman, 2002; Corruccini et al., 1982; Mann et al., 1987; Watters 1994). However, beliefs and traditions on most, if not all the islands of the Caribbean, mitigate against excavation of human remains unless the sites are in imminent danger of destruction. More recent efforts at recovery of information about burial practice have focused more on documentation of surface markers and restoration of sites. A good example of this type of study is the work of Michelle Terrell (2004), who restored and documented the markers and burial yard of a Jewish community on Nevis. Archaeological techniques were combined with oral history and synagogue records to restore and interpret this site (Fig. 16). Currently Helen Blouet is carrying out a study of mortuary practices on St. John as part of a broader GIS study of sites being carried out cooperatively by Syracuse University, the National Park Service, and the Department of Parks and Historic Preservation of the U.S. Virgin Islands (Armstrong, Hauser, Knight, and Wild, 2007; Armstrong et al., 2008).

Recent scholarship in the Caribbean has focused on exploring the details of life not often depicted in formal paintings of the Caribbean landscape. In light of the predominance of variation and diversity, researchers have turned away from narrow debates on the ethnic antecedents of Caribbean populations

Fig. 16 Jewish Cemetery, Nevis. An archaeological survey and ethnohistorical investigation by Michelle Terrell (2004) was used to assist restoration of this cemetery (photograph by D. Armstrong)

and focused on exploding the varied scales (spatial and social) through which colonial subjects and enslaved laborers negotiated everyday life. They are doing this with research on islands throughout the Caribbean from the small islands of Dominica, St. John, and Nevis to the larger islands of Cuba, Puerto Rico, and Jamaica. These archaeological investigations engage detailed historiographic research and an understanding of the specific cultural and historical trajectories of each locale and are working to place and explain findings in terms of both local and global issues and contexts. A good overview of the depth and complexity of recent findings can be found in the edited volumes by Haviser and MacDonald (2006) *African Re-Genesis: Confronting Social Issues in the Diaspora*; Farnsworth's (2001) *Island Lives: Historical Archaeologies of the Caribbean*; and Haviser's (1999a) edited volume *African Sites Archaeology in the Caribbean*.

A good source for summaries of findings and a starting point for research in the Caribbean can be found in a wide array of cyber sites on the World Wide Web. These include the Institute of Nautical Archaeology's virtual museum (http://ina.tamu.edu/vm.htm) and sites posted by the Jamaican National Heritage Trust (http://www.jnht.com/#), the Museo del Hombre in the Dominican Republic (http://www.cultura.gov.do/dependencias/museos/museodelhombredominicano.htm), and U.S. National Park Service sites for El Morro and sites in the U.S. Virgin Islands (http://www.nps.gov/elmo/; http://www.nps.gov/viis/). Local museum sites include the one maintained by the Eustatius Center for Archaeological Research (http://www.secar.org), and the International Congress of Caribbean Archaeology maintains a list of current research and archaeological Web links for the Caribbean (http://museum.archanth.cam.ac.uk/IACA.WWW/links.htm). Web sites associated with North American institutions with long-standing interests in the Caribbean are also useful. These include the above site for Texas A&Ms INA and sites maintained by Syracuse University (http://www.maxwell.syr.edu/anthro/regions/archaeology.asp) and the Florida State Museum (http://www.flmnh.ufl.edu/). The latter is particularly good for examining photographs of the museum's archaeological collections and for its bibliography on Caribbean archaeology. Finally, UNESCO includes descriptive information regarding sites in the Caribbean that have been afforded protection via designation as World Heritage Sites (see Haviser [2005a, 2005b] for a discussion of the nomination process and also problems related to commercialization of heritage). However, as indicated in the UNESCO Web site, and by the paucity of listed sites for the Caribbean, the combination of economic conditions within island nations and related problems has resulted in underrepresentation of sites for the region, despite both the diversity of historical contexts represented and the quality of site preservation found for the region (http://whc.unesco.org/). Recent efforts, including a special Caribbean UNESCO heritage session in Martinique in 2004, have begun the process of addressing this problem (http://whc.unesco.org/en/activities/410).

In a sense, there is a danger in historical anthropology of situating historical forces, such as colonialism, capitalism, and modernity, in a historical framework. We have a tendency to assume a set of social relationships based on anachronistic analogies. Surprisingly, to date, very little work has been done on the initial era of colonial plantation and agricultural sites prior to the mid-seventeenth century. However, Robin Woodward's recent studies of Seville plantation provide an important picture of social and economic systems from the early days of colonial settlement of the region. Woodward's study of a sixteenth-century mill site at Seville la Nueva, the

first capital of Spanish Jamaica, shows the transfer of feudal systems of agricultural production in Jamaica. Sharecroppers worked the lords' land and produced crops that were processed in a central milling operation. The mill and related settlements at Seville project a center of craftspersons, artisans, and agricultural producers (Woodward, 2006).

While community has been an important trope in Caribbean historical archaeology, this has generally been configured in terms of plantation communities (see Armstrong, 1990; Higman, 1999; Wilkie and Farnsworth, 2005); those that examined urban settings include the detailed studies of Port Royal (Hamilton, 1986, 1988, see also http://ina.tamu.edu/vm.htm) and a series of current studies that examine urban communities and how they intersected with the Atlantic world. Fredrick Smith and Karl Watson (2009) look at two urban centers in Barbados at the beginning of "King Sugar." They argue that residents of these communities understood that they were at the interface between the Anglophone Caribbean and the Atlantic world. The cities' position as such were not inevitable; Barbados' centrality in England's colonial agenda in the West Indies came from enormous effort among local merchants to facilitate trade and "celebrate" the urbanity of Bridgetown. What is interesting in this article is that Smith and Watson do not take for granted Bridgetown's role in the sugar industry, rather they place it squarely in a spatial and temporal interstices where "diluted social distinctions between free people gave Bridgetown the appearance of a cosmopolitan city," this in turn made it "a good place to do business" (Smith and Watson, 2009). Another new project looks at the cultural landscape of the Danish Port city at Charlotte Amalie through the excavation of urban residential compounds (including colonial merchants quarters, low-level managerial households), and the residences of slaves and servants will add even more understanding of the texture and complexities of cosmopolitan life in an early nineteenth-century port town (Armstrong, Williamson, and Knight, 2007).

While the plantation space did define part of the Diaspora experience, important work has been conducted on communities that have existed outside of the agro-industrial context. For the past 15 years, Kofi E. Agorsah has been researching Maroon communities in Jamaica (Agorsah, 1992, 1993) and later in Suriname (Agorsah, 2006). The long-term project combined archaeological testing, oral history, and ethnoarchaeology to attempt to delimit and chronicle ephemeral settlements (see http://www.maroonheritage.pdx.edu/index.html).

Likewise, it has become increasingly clear that while plantation labor was a crucial factor in the formation of Caribbean societies, it does not encompass the totality of colonial life. Defining the ways in which colonial subjects, including peoples of African, European, and indigenous descent proved to be a counterpoint to administrative control and capitalist regimentation has been a major focus of study. As many have noted (Beckles, 1989a, 1989b, 1991, 1999; Boa, 1993; Hall, 1999 [1989]; Tomich, 1993), the independent production by enslaved laborers on provision grounds and the exchange of those goods were activities outside the control of the planter also in figurative and material ways (see Pulsipher, 1986, 1991; Pulsipher and Goodwin, 1999). Examination of independent and attached artisanal production has been the focus of many studies (Armstrong, 2003a; Armstrong, Williamson, and Knight, 2007; England, 1994; Goucher, 1990, 1993, 1999; Hauser, 1998, 2008). The goal of this research has not only been to document the craft industries of the Caribbean à la Handler (Handler, 1963a, 1963b, 1964), but, additionally to see how it fits within a larger political economy. Following the work of Hauser (2001, also Kelly et al., 2008) on changes in local and industrial production centers, industrial pottery practices on Barbados have begun to be examined on Barbados. Thomas Loftfield and Dwain Scheid are currently carrying out studies examining the transitions from plantation-based production of sugar pots and tiles for the Barbados estates to the more recent domestic pottery production seen today in the islands Chalky Hills region (Handler, 1963a, 1963b; Loftfield, 2001).

Mark Hauser, in his study of eighteenth-century locally produced coarse earthenware pots from several sites throughout Jamaica, looked to the ways in which this specific craft industry pointed to a larger world of social relations that pitted informal and formal economic activities against each other. Excavations of Jamaican plantations and urban sites dating to the first half of the eighteenth century and earlier tend to uncover a significant number of these locally produced coarse earthenwares, known in Jamaica as *yabbas* (Armstrong, 1990; Hauser 2001,

2008; Hauser and Armstrong, 1999; Matthewson, 1972a, 1972b, 1973; Meyers, 1999; Reeves, 1997). These low-fired ceramics have long been produced throughout the Caribbean, primarily by women, and have been used for a number of utilitarian purposes, including the storage of food and water, as chamber pots, and for cooking stews and pottages. These wares were produced in pottery-production centers and distributed throughout the island via a complex internal marketing system.

These market studies highlight not only the ancillary ways in which Caribbean folk made money (though this is not insignificant) but more importantly point to ways in which wider social networks were developed and reinforced through economic relationships. Simply put, these markets were not only island-based economic contingency plans, they were a counterpoint to the larger colonial economy. Research has shifted to looking at interisland exchange. In his analysis of the maritime community on the East End, Armstrong (2003a, 2003b) highlights the role of links forged through maritime trade, which enabled a degree of freedom for East Enders that their enslaved contemporaries on the neighboring sugar estates did not enjoy. Exploring this interisland trade—sometimes contraband, sometimes cabotage—has been the focus of research on ceramic production and trade in the eastern Caribbean by Kelly et al. (2008).

While there is increasing interest and a considerable potential in the examination of hidden and sometimes illicit trade in the Caribbean (Hamilton, 2006; Skowronek and Ewen, 2006), analysis of this exchange is faced with numerous limitations. First and foremost, as many historians have pointed out, the majority of this trade comprised perishable items like sugar, rum, and cattle, which have little to no archaeological signature. The products will be consumed, and the barrel staves from the containers used to transport them will rot. We are left therefore with evidence from only a small sector in this trade.

Linguistic boundaries, insularity, and the residue of colonial political divisions, including the fact that many relevant documentary materials are located in European archives, have served to limit scholars' ability to carry out comparative studies that treat the region comprehensively. Moreover, regionalism in one's research expertise tends to focus one's knowledge within the confines of specific geographic boundaries, even though each island-based community was engaged directly and indirectly with and was a part of global networks of social and political interactions. While the specific sites studied by archaeologists were impacted differentially by specific events—from hurricanes to change brought on by local and global economic and political shifts—all were engaged in recurrent interaction and bound by the global trends in the world around them.

Today, as we examine the potential of archaeology in the region, we find that the Caribbean remains an excellent venue for the study of diverse cultural expressions. The dramatic social and economic shifts of the nineteenth and twentieth century left abandoned vast numbers of sites. Many remain clearly visible on the landscape while others lie somewhat hidden either under the regrowth of tropical forests, or, as in the case of urban sites, behind and beneath the walls of rapidly expanding cities. There is a tremendous potential for the recovery of new information and interpretive insights from these sites, but, as is the case elsewhere in the world, many of the Caribbean's archaeological sites are in increased danger of destruction due to patterns of rapid, and at times unmonitored, development.

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French Colonial Archaeology

Gregory A. Waselkov

Introduction

French colonial archaeology today is largely a North American phenomenon, dominated by Canadian archaeologists (many of whom are francophone) working mostly in Québec and the maritime provinces—an area that originally comprised the colonies of Nouvelle France (New France) and Île Royale. A smaller contingent of archaeologists in the United States studies the southernmost sites of New France and the widely dispersed outposts and towns of the colony of Louisiane (Louisiana) found throughout an area spanning much of the midcontinent. A few French, Canadian, and American archaeologists are beginning to investigate the colonial origins of the French Caribbean and Guyane (French Guiana) (Fig. 1).

So that readers can more readily follow the discussion of archaeology at French colonial sites, this review begins with a historical summary of French colonialism in the Americas from the sixteenth through eighteenth century. This chapter draws heavily from my guide to the archaeological literature of French colonial North America published some years ago (Waselkov, 1997), which also provides an extensive list of references to interested researchers. I am grateful to the Society for Historical Archaeology for permission to use the introductory material from that guide as a basis for this review chapter.

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Historical Perspective

French interest in overseas colonization developed early in the sixteenth century, at first focusing primarily on the Americas newly discovered to Europeans (for a comprehensive overview, see Boucher, 1989). The archaeological discussion that follows this section is limited to that region, and more specifically to North America, where most French colonial archaeological research has so far occurred.

Exploration under official French auspices began in 1524, when Giovanni da Verrazano skirted the coast of North America between Florida and Newfoundland in search of a Northwest Passage to the Pacific. Prior to that date, however—perhaps even predating the first voyage of Columbus—French, Portuguese, and Basque fishermen sailed from Europe every summer to harvest cod off Newfoundland and Labrador, and there met indigenous peoples and engaged in intermittent trade.

Jacques Cartier led the first royally sponsored probes inland, beginning with an exploratory voyage in 1534 that found Micmac Indians on the Gaspé Peninsula already willing to trade furs for European goods. On his second voyage, Cartier's ships entered the St. Lawrence River, searching for minerals as far as the Iroquoian town of Hochelaga (at Montréal). From 1541 to 1543, Cartier accompanied a colonizing expedition led by a Huguenot noble, La Rocque de Roberval, whose attempts to establish a settlement upstream from Iroquoian Stadacona (present-day Québec) were defeated by Native hostility, harsh winters, and the colonists' inability to find gems and precious metals.

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Fig. 1 Eighteenth-century French colonies in the Americas

By the 1540s, Basques from Spain and France began whaling in the Strait of Belle Isle between Newfoundland and Labrador, operating offshore on large galleons and supported by coastal tryworks for rendering the blubber. French and Basque sailors also engaged in fishing, whaling, and fur trading in the St. Lawrence estuary from the 1560s until at least 1600.

During this same era, French ships routinely visited the Brazilian coast of South America searching for logwood and that portion of the North American coast from Florida to Cape Hatteras (North Carolina) to obtain sassafras. The latter region was the scene of another Huguenot colonizing attempt, led this time by Jean Ribaut, who in 1562 built Charlesfort on Parris Island (South Carolina). Charlesfort was soon abandoned, but a large-scale Huguenot expedition jointly commanded by Ribaut and René de Laudonnière arrived 2 years later with 600 men, women, and children to construct Fort Caroline (near Jacksonville, Florida). In response

to this French challenge to their Caribbean hegemony, the Spanish ruthlessly destroyed the fort and its inhabitants to forestall French interloping.

French interest in North America revived in the 1580s, as offshore trading by captains from St. Malo developed into a profitable commerce in Canadian furs. When Samuel de Champlain surveyed the St. Lawrence valley in 1603 he found the Iroquoian villages of Cartier's day abandoned, but the land fertile and ripe for colonization. By 1608, Champlain gained royal consent for a St. Lawrence outpost at Québec, where he built a *habitation*, the first settlement of the colony of New France. From this strategic point, Champlain negotiated a series of trade alliances with the Ottawas, Montagnais, and Hurons, through which the French were drawn unwittingly into a long series of wars with the New York Iroquois.

Missionaries soon joined the colonists, who numbered only about 100 as late as 1626. Members of the Récollets, a branch of the Franciscans, founded a Huron mission in 1615 and were joined by Jesuits in 1625, but all returned to France when Québec fell to English privateers in 1629. With the Treaty of Saint-Germaine-en-Laye (1632), France regained Canada, Champlain returned to Québec, and the Jesuits renewed their missionization efforts, first among the Hurons in 1634, and by 1637 at the Algonquin mission village of Sillery near Québec. Two years later, Ursuline nuns arrived in New France to educate French and Indian girls. When the Hurons were defeated, dispersed, and largely assimilated in 1649 by Dutch-armed New York Iroquois, New France lost its most important Indian allies and trade partners.

Huguenots, who had instigated many of the initial French colonizing ventures, were officially excluded from New France after 1627, making the task of attracting colonists to a land with such a cold climate even more difficult. The first large party of immigrant families arrived in Québec in 1636 and Montréal was established in 1640, but high mortality in the colony and low levels of immigration kept the population hovering around 300 in the 1650s. During that same period, however, French colonization in the Caribbean grew at an explosive rate.

Earlier efforts to establish French settlements in northern South America among the Tupinambas between 1604 and 1616 failed in the face of intense Portuguese opposition. Then, in 1625, the Company of St. Christopher settled that Caribbean island for tobacco farming. French colonists established other Caribbean footholds in the 1630s and 1640s on Martinique and Guadeloupe, where sugar, indigo, and cotton plantations proved immensely profitable. By 1645, 8,500 French colonists were ensconced in the Caribbean, overseeing the labor of a larger number of African slaves. Around midcentury, French freebooters (*flibustiers*) began to congregate on the west half of Hispaniola, known as Saint-Domingue (Haiti), and eventually aspired to legitimate colonial status. Communities of fugitive slaves (*marrons*) eventually became so powerful on the French islands that finance minister Jean-Baptiste Colbert drew up the Black Code, issued in 1685, which attempted to ameliorate the treatment of slaves, thereby (Colbert reasoned) decreasing the risk of slave revolts while protecting the state's interest in enforced labor production.

Meanwhile, in North America, the population of Acadia (modern Nova Scotia and New Brunswick) had been growing rapidly, reaching 500 colonists by 1671. Acadian farmers cleared uplands and reclaimed tidal marshlands to create remarkably productive wheat fields and cattle pastures. Marshlands were enclosed with sod-and-log dykes and then drained during low tides through ingenious sluices (*aboiteaux*) that kept out saltwater during high tides. In New France, certain high-status individuals (*seigneurs*) obtained large land concessions from the king. *Habitants* gained title to land by clearing and permanently settling on individual lots, which were usually long and narrow, fronting on a river. Later, in French Louisiana and the Illinois Country, the long lot tradition continued without the seigneurial system.

After a string of colonizing debacles in South America during the 1630s and 1640s, the French managed in the 1670s to found the struggling colony of Guyane, which supplied wood, cattle, and provisions to the Caribbean island colonies. The 1670s were also a decade of exploration west and south from New France. Although contrary to an official policy of retrenchment to the St. Lawrence valley, royal governors encouraged illicit trading by *coureurs de bois* among the western tribes. Governor Frontenac sponsored Louis Joliet and Jacques Marquette's descent of the Mississippi River to the

Arkansas River in 1673, and built interior forts to personally control the fur trade. With the profitability of a western fur trade becoming increasingly clear, Colbert moved to legalize the trade by instituting a system of permits (*congés*) issued to individuals.

René-Robert Cavelier, Sieur de la Salle, pursued Frontenac's goal of expanding French control over the Mississippi valley, finally descending the Mississippi to the Gulf of Mexico in 1682. His attempt to claim the northern Gulf coast for France with a colonizing expedition to Matagorda Bay (Texas) in 1684 ended with his murder and dissolution of the settlement. Meanwhile, a series of campaigns from 1687 to 1696 destroyed most of the Seneca, Mohawk, Onondaga, and Oneida towns in the Finger Lakes region of New York, finally eliminating the Iroquois threat to New France by gaining their pledge of neutrality.

During King William's War (1689–1697), the citizens of Québec successfully repelled an English attack, and Pierre Le Moyne d'Iberville emerged as one of the most capable French military commanders after capturing English posts on Hudson Bay and defeating an English fleet. At war's end, the Treaty of Ryswick confirmed French control of Saint-Domingue and granted France the *asiento*, the right to trade slaves in Spanish colonial ports, which also proved a boon to smuggling. In this era of Bourbon alliance, Iberville arrived on the Gulf coast to establish the colony of Louisiana. Finding Pensacola Bay—the best natural harbor on the northern Gulf—in Spanish hands, Iberville built a temporary post in 1699 on Biloxi Bay, which he eventually abandoned with the establishment of the town of Mobile in 1702. Antoine Laumet, La Mothe Cadillac, had constructed a fort at Detroit a year earlier to secure the difficult transcontinental route from New France to the Mississippi. By the next decade, the founding of New Orleans (Louisiana) and Kaskaskia (Illinois) consolidated French control of the lower and central Mississippi valley.

With the outbreak of Queen Anne's War in 1701, Spanish colonial ports cautiously relaxed mercantilist restrictions and permitted trade with allied French ships, thereby creating a commercial boom in the French Caribbean. The English capture of Port-Royal (in modern-day Nova Scotia) in 1710, however, placed most Acadians under British rule. By the Treaty of Utrecht (1713), France ceded Port-Royal, Hudson Bay, and Newfoundland, prompting the transfer of their cod fisheries to Île Royale (Cape Breton Island), where Louisbourg became the principal port for the inshore fishery and a major trade entrepôt linking New France with Europe, New England, and the Caribbean.

Provoked by years of slave raids and trade abuses, many of the southeastern Indian tribes killed or expelled British traders from that region in the Yamassee War of 1715, providing an opportunity for the French in Louisiana to establish Fort Toulouse among the Alabamas and Fort Rosalie at the Natchez villages. In the upper Great Lakes, the construction of Fort Michilimackinac in 1715 secured French trade interests throughout that vast interior region. The French became embroiled in two Indian wars at this time, one against the Fox (1712–1737) in the upper Great Lakes, and a second with the Chickasaws (1736–1740) who had sheltered Natchez refugees after that chiefdom destroyed the French settlements among them in 1729.

The first half of the eighteenth century was a period of population growth, demographic maturation, and commercial development in French North America. By 1760 the French population of New France exceeded 70,000, Montréal and Québec had become urban centers, and industrial ironworking at the Forges du Saint-Maurice contributed to colonial self-sufficiency. However, all this paled in comparison to the growth of British North America, with 50 times the population. The French court valued its North American colonies primarily for their strategic locations blocking expansion by the British. They certainly were held in less esteem than the extraordinarily profitable Caribbean islands.

King George's War (1744–1748) in America centered mainly on Île-Royale. An expedition launched from New England lay siege and captured the Fortress of Louisbourg in 1745, only to see it returned to French control by the Treaty of Aix-la-Chapelle (1748). With a renewal of hostilities, the British began forcibly deporting the French population of Acadia, exiling approximately 13,000 people. Several thousand eventually were allowed to return in the 1770s, and thousands more found refuge in Spanish Louisiana.

The Seven Years War (1754–1763) began in the Ohio Country when Virginia challenged the French

construction of Fort Duquesne at the head of the Ohio River. After a number of French victories under the leadership of the Marquis de Montcalm at Fort William Henry and Fort Carillon, the British military overwhelmed Louisbourg (1758), Québec and Guadeloupe (1759), Montréal (1760), and Martinique (1762). Although Louisiana remained unconquered, it was ceded along with New France and Île Royale so that France could retain the Caribbean islands and Guyane. Many colonists in eastern Louisiana fled British West Florida, as it came to be known, in favor of Spanish-controlled New Orleans and territory west of the Mississippi River. In Canada, some French elite did sail for France, but most of the population stayed and adapted to British rule.

French Colonial Archaeology in the Americas

Origins of French Colonial Archaeology in Canada and the United States

The earliest archaeological investigations of French sites in North America mainly concentrated on remains left by famous French colonists (Fig. 2). The 1604–1605 settlement established by Samuel de Champlain on Ste-Croix Island was the scene of the first documented excavation at a French colonial site, conducted in 1797 by a joint U.S.–British commission establishing the Maine–New Brunswick boundary. The search (still fruitless) for Champlain's grave in Québec City has been underway periodically for over a century, and sites associated with Jesuit missionaries, particularly of those martyred among the Hurons in the seventeenth century, have generated intense interest since the 1840s. Despite this tendency to focus on the historically famous, these projects have sometimes yielded other important information. Kenneth Kidd (1949) transcended his church sponsor's parochial goals during World War II–era excavations at Sainte-Marie-among-the-Hurons and set high standards for excavation, analysis, and reporting that positively influenced the development of historical archaeology as an academic discipline.

Similarly, John Dawson's (1860) essentially antiquarian, mid-nineteenth-century search for traces of explorer Jacques Cartier's voyage up the St. Lawrence River in 1535–1536 culminated in a much-debated identification of Cartier's anchorage at Iroquoian Hochelaga in modern Montréal. Dawson's work led eventually to Pendergast and Trigger's (1972) reevaluation of his argument that cast serious doubt on Dawson's conclusions. Their work stands as a model of rigorous ethnohistorical analysis involving the testing of archaeological evidence. Because of the nature of many of these sites, an awareness of the close interrelationships between French colonists and native peoples has also pervaded French colonial archaeology in the Americas for well over a century (e.g., Walthall and Emerson, 1991).

Much late nineteenth- and early twentieth-century Canadian historical archaeology can be viewed as contributions to nation-building; that is, as celebrations of remarkable colonists admired equally by Canadians of English and French descent for their bravery and sacrifice (Trigger, 1985:5–6). Because archaeology could provide tangible relics of a glorious past, policy makers occasionally acknowledged a public interest in the quest for sites from Canada's "Heroic Age" and the French regime. By the mid-twentieth century, archaeology was poised to benefit from a convergence of Canadian national pride, a growing awareness of the economic profits to be derived from tourism at historic parks, and political efforts to reduce unemployment in some provinces by sponsoring huge federally funded excavation and restoration projects. The most ambitious outcome was the Fortress of Louisbourg project, a monumental effort to excavate, reconstruct, and furnish one-fourth of the colonial town and its defenses, and present the site as Canada's preeminent historic interpretive park (Fry, 1969). Between 1959 and 1979, hundreds of out-of-work Cape Breton coal miners were employed as excavators and builders (and later as interpretive guides) in a project that has assembled an excavated artifact collection of several million specimens (Harris, 1993). Other long-term excavation programs were also carried out during this era at the Forges du Saint-Maurice and Québec City's Place Royale (Picard, 1979), and on Basque whaling sites at Red Bay, Labrador (Tuck and Grenier, 1989).

Fig. 2 Some important eighteenth-century French colonial archaeological sites in North America

These projects were a training ground for many of the archaeologists currently engaged in French regime research today. However, the field of French colonial archaeology is by no means entirely defined by the Louisbourg model. While many French colonial sites in the United States have likewise been excavated primarily to meet park interpretive goals (such as Forts de Chartres [Keene, 1991], Michilimackinac [Stone, 1974] [Fig. 3], and Toulouse [Waselkov, 1989]), other sites have been mitigated prior to road

Fig. 3 Artifacts from Fort Michilimackinac, early to mid-eighteenth century (clockwise from *upper left*): rooster bottle stopper of bone, lead seal with the mark of the Compagnie des Indes, green lead-glazed earthenware bowl, rosary of ivory beads on brass chain (courtesy Mackinac State Historic Parks)

construction (such as the Cahokia Wedge site [Gums, 1988]), some have been excavated by university field schools (the Intendant's Palace in Québec City [Moussette, 1994] [Fig. 4]), and still others were the subject of grant-funded research (Fort Pentagoet [Faulkner and Faulkner, 1987], Fort St-Pierre [Brown, 1979], and Old Mobile [Waselkov, 1999, 2002] [Fig. 5]). The remarkable cofferdam excavation and on-going conservation of La Salle's ship, *La Belle*, wrecked in Matagorda Bay, Texas, in 1686

Fig. 4 Glass bottle with threaded pewter collar (*left*), ca. 1700, from Rocher de la Chapelle, on Ile aux Oies, Québec, and green lead-glazed earthenware jug (*right*), ca. 1760, from the first Intendant's Palace, Québec City (courtesy Lise Jodoin, Laboratoire de restauration/conservation, Département d'histoire, Université Laval)

Fig. 5 Red pipestone pipe bowls, a bead, and worked slabs from the Old Mobile site, 1702–1711 (courtesy Center for Archaeological Studies, University of South Alabama)

(Bruseth and Turner, 2005) (Fig. 6), required six million dollars in public and private funds, reflecting a current trend away from sole reliance on government appropriations and grants. In addition, some major explorations of rural farms and seigneuries are beginning to correct an imbalance in previous French colonial archaeology that has focused almost exclusively on urban and military sites (Côté, 2005; Guimont, 1996; Nadon, 2004).

Archaeological research on historical sites has begun in other parts of French America. Martinique and Guadeloupe have seen recent excavations (Kelly, 2004), as has French Guyane (Bernier, 2003; Chouinard, 2001; Le Roux et al., 2007) (Fig. 7), where construction of a dam by Électricité France at Petit Saut has led to salvage investigations of sites dating from the mid-seventeenth century to the present (Puaux and Philippe, 1997). Projects such as this, which explored changes in colonization approaches and the effects of European settlement on native Indians, are evidence of an awakening interest in archaeology of the modern era among French archaeologists working in overseas Départements of France.

French Colonial Material Culture

For a number of historical reasons, theory has played a very small role in French colonial archaeology. Until recently, most archaeology on French colonial sites has been driven primarily by the needs of managers and interpreters at historical parks. Further, many Canadian archaeologists have received their training in academic departments of history. Social theory typically finds little support in either location. As a consequence, few publications on French colonial archaeology contain explicit theoretical statements; most are descriptive accounts of features and artifacts anchored in historical context by narratives describing the lives of site occupants. Such reports have tremendous potential as data reservoirs for synthetic and

Fig. 6 Cache of brass artifacts from the wreck of *La Belle*, 1686, including kettle, two candlesticks, ladle, candleholder or chamberstick, and colander (courtesy Texas Historical Commission)

Fig. 7 Refined white earthenware pitcher (*left*) with black transfer print, marked on base "CREIL," a French pottery manufacturer in the Paris region between 1808 and 1840, and a Rouen faience plate (*right*), ca. 1750, both from the Loyola site, French Guyana (courtesy Lise Jodoin, Laboratoire de restauration/conservation, Département d'histoire, Université Laval)

comparative studies, but that capacity remains largely unexploited.

However, the situation decades ago was much worse. Beginning in the 1930s and continuing into the 1960s, reports written primarily for use by restoration architects only described structural features, with little or no consideration of associated artifacts. Increasing frustration among historical archaeologists with that state of affairs, coupled with their growing awareness of the anthropological and historical significance of historic sites, resulted in a fuller descriptive coverage of artifacts in cultural contexts. Parks Canada for a time encouraged research and publication by material culture specialists that has proven beneficial to the entire field of historical archaeology. Their high-quality publications have enduring value as classificatory guides and for comparative purposes. Although decades of federal budget cutting have effectively dismantled that pioneering program of material culture studies, other agencies in Canada and the United States continue to sponsor material culture studies aimed at specialists as well as the interested public (Brassard and Leclerc, 2001; Evans, 2003; Lapointe, 1998).

Of all artifact categories found at French colonial sites, ceramics have undoubtedly received the most attention. Some particularly important studies have established sources of manufacture or presented widely applicable classificatory schemes. Reports on some sites, such as Fort Michilimackinac and Champlain's Habitation, treat French pottery of all sorts—coarse earthenwares, faïence and other refined earthenwares, and stonewares—in comprehensive analyses that also serve as good introductions to the topic (Miller and Stone, 1970; Niellon and Moussette, 1985).

Coarse earthenware potteries with a green lead glaze originated in a number of regions of western and northern France. These distinctive ceramics have been identified on stylistic grounds at many North American sites, with especially important studies of collections from sites such as Louisbourg, Place Royale in Québec City, *Le Machault* shipwreck, and the Trudeau site in Louisiana (Barton, 1977, 1981; Moussette, 1982; Steponaitis, 1979).

The study of faïence—French-made, tin-glazed, fine earthenware—has principally been the domain of decorative arts specialists in France, although some French researchers are now developing an interest in the processes of its manufacture and export to overseas colonies (Rosen, 1995). In North America, John Walthall (1991a) proposed a classification system for faïence found at Illinois sites that has recently been revised for broader applicability across North America (Waselkov and Walthall, 2002). For the very diverse site assemblages, Canadian archaeologists

have preferred a less-specific classification based on regional decorative styles (Bernier, 2003; Blanchette, 1981; Genêt, 1996).

French-made stonewares are rarely reported from sites south of Canada, perhaps partially because of a lack of familiarity with this ceramic category among archaeologists in the United States. Some excellent descriptive and compositional studies are available, though, that should permit accurate identifications of varieties produced in Normandy, Béarn, Beauvaisis, and the Loire valley (Chrestien and Dufournier, 1995; Flambard Héricher, 2002). Chinese porcelain has been found, albeit normally in small quantities, at many eighteenth-century French colonial sites (Genêt and Lapointe, 1994).

White clay pipes have generally been attributed to English or Dutch manufacture, although a small and poorly known French pipe industry did exist and may have contributed to North American assemblages (Walker, 1971).

Copper and brass kettles were an important trade commodity beginning as early as the 1580s, and their acquisition had a major impact on Native American societies and material culture. Particularly in New France, Indian pottery manufacture declined rapidly as kettles increased in availability. In Louisiana, however, kettles found wide acceptance but did not eclipse the vibrant native ceramic tradition (Brain, 1979). Brass finger rings, usually called Jesuit rings, are the subject of one of the few explicitly theoretical articles published by a French colonial archaeologist. Charles Cleland (1972) posited that "style drift" accounted for the simplification in ring decoration he thought had occurred between 1700 and 1760. More recent analyses of temporal and geographical distributions of ring styles suggest that economic and social factors more adequately account for shifts in decorative styles (Mercier, 2007; Walthall, 1993).

Glass analyses by material culture specialists from Parks Canada, along with several important works on collections from Place Royale and Fort Michilimackinac, have identified major categories of French container glass (Jones, 1981). Some studies focus specifically on bottles (Harris, 1979), and others on tableware, including stemware, tumblers, bowls, and wine glass coolers (McNally, 1982).

Glass beads were primarily imported for trade to Native Americans. Consequently, most have been recovered from Indian village sites and from fortified trading entrepôts (Brain, 1979; Stone, 1974). The widely used Kidd and Kidd (1970) glass bead typology was developed in part from bead collections excavated at French colonial and French contact sites in Canada. Chronological and geographical distribution studies of glass beads have led to considerable refinement of bead chronologies; they are undoubtedly one of the most sensitive temporal indicators currently available for sixteenth-, seventeenth-, and eighteenth-century sites (Smith, 2002).

Beginning in 1736, cast iron artifacts produced at the Forges du Saint-Maurice included stove parts, firebacks, kettles, and cannonballs (Moussette, 1983). Building hardware and furniture hardware are the largest categories of iron artifacts recovered from most French colonial sites (Stone, 1974), with nails (Edwards and Wells, 1993; Frurip et al., 1983) and door hardware (Moogk, 1977) receiving particular attention.

Although a few intact colonial-period firearms survive in private collections and public museums, most of our knowledge of French trade guns derives from archaeological specimens (Bouchard, 1976; Hamilton, 1980). After many years of debate, archaeologists have managed to determine the origins of different styles of gunflints, including several varieties made of French raw materials (Durst, 2009; Emery, 1985; Hamilton and Emery, 1988).

Most of the above-mentioned material culture studies rely on stylistic variation to establish origin of manufacture, but chemical characterization of raw materials is employed increasingly to pinpoint sources of select artifact types. Isotope analyses of lead artifacts have recently demonstrated the potential to distinguish between European and North American geological sources, which should prove useful in evaluating the importance of French colonial galena mining in the central Mississippi valley (Farquhar et al., 1995). Copper and brass kettles imported by Basques and Norman French in the sixteenth and seventeenth centuries to the northeast Atlantic coast, where they are found mainly in Indian graves, have been intensely studied to determine sources of manufacture (Fitzgerald, 1995; Fitzgerald et al., 1993; Whitehead, 1993). Several neutron activation analyses have begun to characterize French

and Dutch trade bead assemblages on the basis of predominant chemical compositions—a result that has clear implications for the study of colonial trade spheres (Kenyon et al., 1995). This technique offers great potential to sort out the numerous production sources of French earthenware ceramics (Olin et al., 2002). Artifacts from the Forges du Saint-Maurice in Québec and from a forge operated for the Jesuits in Guyane have been the subjects of sophisticated metallurgical studies (Chouinard, 2001; Unglik, 1990). Most recently, Ehrhardt (2005) has applied metallurgical and spectrographic analysis techniques to copper and brass obtained in trade from the French by native Illinois Indians in the late seventeenth century.

Trade and Social Interaction

Because sources of exotic goods often can be established with some confidence by archaeologists, the nature, extent, and role of trade systems have been considered more frequently than some less-accessible topics. For archaeologists of French colonial North America, trade with the Old World, intercolonial trade, and trade with Native Americans are all important issues that relate to larger questions of French mercantilism as it was applied during the late seventeenth and eighteenth centuries. How effectively did the *métropole* impose mercantilist limitations on colonial economies? Did official sanctions succeed in stifling colonial manufacturing and intercolonial trade or did colonists find ways to circumvent royal restrictions?

The role of military posts as trade entrepôts has received much attention from archaeologists, particularly because many interior forts were militarily weak and existed only at the sufferance of neighboring tribes, who found the presence of regulated French traders in their midst politically and economically beneficial (Waselkov, 1993). Intensive trade with Native Americans has been documented at Forts Michilimackinac (Stone, 1974), Ouiatenon (Noble, 1983; Tordoff, 1983), St-Pierre (Brown, 1979), Toulouse (Waselkov, 1989), and many other sites, including recently discovered Fort St. Joseph in Niles, Michigan (Nassaney et al., 2002).

Although I will not go into depth regarding the responses of Indian societies to French interaction, the French response to interaction with Indians deserves mention (Brown, 1992). Throughout much of the sparsely populated interior territories of New France and Louisiana, French colonists depended on native-grown foodstuffs for their subsistence. In addition, at remote outposts subject to infrequent resupply from France, items of material culture were often purchased from Indians by the colonists for their own use. For instance, Colonoware ceramics—pottery made by non-Europeans in imitation of European vessel forms—have rarely been found on Canadian sites, where contact with France was most easily maintained. However, French sites in the lower Mississippi valley contain traditional kinds of Indian pottery and Colonowares in a wide variety of forms, including plates with foot rings, pitchers, and bowls (Cordell, 2002). Evidently, in French Louisiana, poorly supplied colonists provided a market for Indian potters, farmers, and hunters.

The material culture of colonists and Native Americans also overlapped in the realm of smoking pipes. Micmac-style and calumet-style pipe bowls of ceramic and stone have been recovered from numerous French and Indian sites in Canada and the Louisiana colony. Some researchers have argued that the spread of the calumet ceremony coincided with, and may have been accelerated by, the appearance of French colonists in southern North America (Brown, 2006). Pipes, beads, and pendants of catlinite and similar-looking red pipestones were evidently made by both peoples, since whittled and drilled pieces of red stone are known from Fort Michilimackinac, Old Mobile, and many Native American sites (Gundersen et al., 2002; Morand, 1994). For the French colonists, calumets might have served simply as tobacco pipes—like the white clay European-made pipes found in large quantities at French colonial sites—but their presence in so many French contexts also suggests at least partial acceptance of the associated Indian symbolism and meaning.

Archaeologists have long recognized the potential value of estate inventories as aids to interpret the incompletely preserved assemblages of personal possessions recovered from even the most painstakingly rigorous excavation. A sophisticated analysis that considers both sets of data can yield a better assessment of relative material wealth than would either

alone. The analytic possibilities offered by this approach have only begun to be explored by French colonial archaeologists using estate inventories from eighteenth-century Illinois and Canada (Cloutier, 1993; Walthall, 1991b). In the most ambitious attempt so far, L'Anglais (1994) has assembled documentary data on ceramic vessel usage in early eighteenth-century Québec for comparison with archaeological data from households in Québec's Place Royale and Louisbourg.

French mercantilism, in its most idealized expression, reserved to the parent country the exclusive right of trade to its colonies, which served as markets for manufactured goods and extractive sources of raw materials (Brown, 1985; Tordoff, 1983). Competition for these ostensibly closed markets, in the form of smuggling and illicit intercolonial trade, meant loss of royal revenue from taxes levied on manufactured goods exported to the colonies. Nevertheless, any goods taxed were (and are) liable to be smuggled, and official control of trade was never so perfectly administered that some smuggling did not occur. When archaeologists have considered the broad context of trade in seventeenth- and eighteenth-century North America, they have found abundant evidence of intercolonial economic intercourse. French-made artifacts have been recovered from English sites in New England and along the Hudson Bay, and French goods are not uncommon at Spanish colonial sites.

On the other hand, Spanish and Spanish colonial ceramics have been identified from Louisbourg and the Arkansas Post. French sites along the Gulf coast and in the Caribbean that date to the War of Spanish Succession (1701–1713) contain abundant evidence of private trading in Spanish ports—a trade that declined precipitously after the Treaty of Utrecht and was largely replaced by illicit trade with British Carolina during the 1720s and 1730s.

Ethnicity in French North America

The French immigrant experience in North America was not the transplantation of a homogeneous people sharing a monolithic culture. Culturally distinct regions of France each contributed in complex ways to create different colonial societies in Acadia, New France, the Illinois Country, Louisiana, the Lesser Antilles, and Guyane. Another source of diversity during the sixteenth century was the Basque border region of France and Spain. The Basque presence in French North America was limited to the shores of the St. Lawrence River and the Canadian maritime coast, where they engaged primarily in whaling and fishing (Lalande, 1989; Tuck and Grenier, 1989). However, the impact of Basque trade with American Indians extended far inland, as evidenced by the recovery of copper kettles and iron implements at numerous Native American sites.

French colonists in Acadia developed a distinctive culture and ethnic identity, and Acadian architecture, settlement patterns, and elaborate land reclamation efforts in coastal marshes have merited substantial study (Bleakney, 2004; Crépeau and Dunn, 1986; Lavoie, 1987). The forced deportation and dispersal of Acadians has not yet received much attention from archaeologists.

The Huguenots were victims of a different kind of colonial diaspora. Exiled from France for their Protestantism, some sought refuge in the English colonies of North America. Several of their houses have been excavated in New York, Maryland, and South Carolina (e.g., Doepkens, 1991), but identifying material indicators of Huguenot ethnicity has so far proven elusive.

More successful has been the archaeological identification of ethnic French households in southeastern North America occupied after the Seven Years War and the end of the French regime. Unlike newly installed British officials in Canada, who effectively prohibited imports of French goods after 1759, Spanish administrators in post-1763 Louisiana and their British counterparts in west Florida evidently sanctioned continued trade with France, especially in ceramics (Yakubik, 1990). Of course, French-made material culture continued in use, albeit in steadily declining quantities, among French Canadians in the decades after the British took control of the region. Investigating how material culture helped francophone Canadians maintain their separate ethnicity in the face of British colonial oppression poses a substantial challenge for archaeologists.

Research on foodways offers another perspective on French colonial ethnicity. Blanchette's (1981) pathbreaking analysis of brown-backed faïence

(*faïence brune*), a tableware designed to withstand direct heat, still stands nearly alone in his consideration of ethnographic, historical, and archaeological data from all parts of French colonial North America. Zooarchaeological analyses of animal bones from French colonial sites indicate an earlier dependence on domesticates in New France than occurred farther south, although wild meat sources continued to provide significant variety in the diet at nearly all locations (Balkwill and Cumbaa, 1987; Cleland, 1970; Martin, 1991).

Theory in French Colonial Archaeology

Explicit theory has played only a small role in the development of French colonial archaeology. Lewis Binford was perhaps the first to suggest (in a brief article originally published in 1962) that comparisons of French colonial remains with those of the succeeding British era could offer insights about the nature of colonialism as implemented by different nations (Binford, 1978). Binford's discussion of Fort Michilimackinac under French and British rule, although little more than a research prospectus, is an example of a scientific approach to historical archaeology that has attracted few followers in the intervening years. An exception is James Fitting's (1976) attempt to describe the different effects that French and British contact had on the native peoples of the Straits of Mackinac, in which he portrays Indians mechanistically responding to the essentially benign French and exploitative British. Later writers have criticized Fitting's historical naiveté (e.g., Brose, 1983), and his failure to consider native peoples' active role in their own adaptive responses to European contact.

Judith Tordoff (1983) applied a systems theory model to French fur trade outposts of the Great Lakes region, and sought evidence of settlement and economic hierarchy in a comparison of materials from Fort Michilimackinac (a "Regional Distribution Center") and Fort Ouiatenon (a "Local Distribution Center"). Interest in the functions of trading outposts has continued, as in Lynn Morand's (1994) recent study of local craft industries practiced at Fort Michilimackinac, and Alaric Faulkner's (1986) analysis of frontier maintenance and fabrication at Fort Pentagoet.

Some of the most original and provocative theoretical work in French colonial archaeology concerns the interpretation of urban sites in Canada. By tacitly rejecting Binford's ahistorical approach in favor of Ian Hodder's contextual materialism, Marcel Moussette (1994, 1996) has analyzed the Intendant's Palace site in Québec City in terms of its structural evolution and changes in symbolic meaning to arrive at a more profound understanding of the site's role in the lives of its inhabitants than is usually achieved in archaeological studies. Historical constraints on successive occupations and the cumulative memory of a site's meaning and importance are powerful forces, particularly in an urban setting. Their systematic study can lead to better understanding of the development and growth of cities, as a mode of environmental adaptation, from their colonial origins (Desjardins and Duguay, 1992; L'Anglais, 1994; La Roche, 1994).

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Natives and Newcomers in the Antipodes: Historical Archaeology in Australia and New Zealand

Susan Lawrence and Peter Davies

Introduction

Settler societies in Australia and New Zealand have long had close relationships founded on shared histories as former British colonies on the remote edge of the empire. Both places are largely the product of nineteenth-century colonization, although Australia has a longer postcontact history that began with the Dutch in the seventeenth century and was followed much later by permanent British settlement at Sydney in 1788. In New Zealand, sporadic settlement by missionaries and whaling parties took place from the early years of the nineteenth century; the country was formally annexed by Britain in 1840. The period of documented history in both countries is relatively short, and the archaeological record of that period is shaped by the influences of global economies and industrial technologies that were already well established. Vital dynamic fields of research have emerged in the last 40 years as terrestrial and maritime archaeologists in both countries have begun to investigate the material record of the postcontact period in the Antipodes.

Historical Background

A comprehensive discussion of historical archaeology in Australasia must include a consideration of both terrestrial and maritime archaeology in Australia and New Zealand. These have quite separate origins and to some extent different interests, but there are compelling arguments for seeing as linked the developmental trajectories and influences of each, and in recent years, there have been explicit moves toward convergence that are evident in joint conferences and research projects.

While there were stirrings of interest as early as the 1920s in New Zealand (Best, 1921, 1927), substantial work in historical and maritime archaeology began in earnest during the 1960s. In Australia, research at a number of early colonial sites on the east coast and in the Northern Territory was undertaken by scholars at the University of Sydney, the Australian National University in Canberra, the University of Melbourne, and the University of New England in Armidale, New South Wales (Allen, 1973; Birmingham, 1976; Culican and Taylor, 1972; Jack, 1980). Researchers came from a number of different academic backgrounds, most notably prehistoric and classical archaeology, history, and geography. The wide-ranging, multidisciplinary nature of historical archaeology in Australia was thus established from the outset, although in contrast to North America and New Zealand, anthropology and anthropologically trained archaeologists have had a relatively minor influence on the field. In 1971, these efforts culminated in the formation of the Australian Society for Historical Archaeology (ASHA).

Maritime archaeology in Australia had its origins in Western Australia (WA) in the 1960s, with the discovery of four Dutch East India Company (VOC) ships that were wrecked in the seventeenth century (Green, 1989; Henderson, 1986; Hosty and Stuart, 1994). The wrecks were discovered by

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amateur divers and historians, and their importance was quickly acknowledged by the WA government, which in 1964 enacted legislation protecting the wrecks and set up a program of maritime archaeology at the Western Australian Museum. Maritime archaeologists and conservators were hired, and the Western Australian Maritime Museum (WAMM) was established to serve as a center for research and interpretation and to house the hull of the *Batavia*, the most intact of the VOC wrecks. Professionals at the WAMM were soon taking a leading role in working with and training avocational divers from a variety of backgrounds. The first national conference on maritime archaeology was held in 1977, and the Australian Institute of Maritime Archaeology (AIMA) was formed in 1982.

At the same time, archaeologists in New Zealand were also becoming aware of the potential of colonial sites (Smith, 1991). Sites associated with Maori occupation were of particular interest, and a number of researchers conducted excavations with a view to analyzing change in Maori culture during the protohistoric period (Coutts, 1972; Groube, 1966). A further catalyst was the Tongariro Power Development Project of the late 1960s, which was scheduled to destroy historic Maori sites in Central North Island. Public concern about the threatened sites led the New Zealand Historic Places Trust to initiate a mitigation project that was the most comprehensive project in historical archaeology then undertaken in the region. The dominant role played by prehistoric archaeologists trained in anthropology departments has been noted by several commentators (Ritchie, 1991; Smith, 1991), and Smith (1991) has argued that their training and interests helped lead to the strong preference for excavation over survey as a fieldwork strategy and the slow integration of information from documentary sources.

By the 1970s, there was general recognition that historical sites on land and underwater were of significance, and historical archaeologists in both countries emerged as important participants in the growing field of heritage management. Efforts to protect archaeological sites became national in scope, one example of which was federal legislation passed in 1976, which protected underwater sites in all Australian territorial waters (Hosty and Stuart, 1994). In New Zealand, the Historic Places Amendment Act was passed in 1975 in order to protect all historic places more than 100 years old (Smith, 1991). In Australia, where most Crown land is controlled by the states, early management initiatives occurred at a state level, and the earliest heritage legislation to protect terrestrial sites was passed by the State of Victoria in 1974. By 1995, all six Australian states had passed legislation protecting heritage places. Federal involvement since 1975 has been through the Australian Heritage Commission (now Council), which is responsible for research and funding of nationally significant sites. In New Zealand, further legislation protecting historic places and shipwrecks was passed in 1993 and 1994.

Through the 1980s, most historical and maritime archaeologists worked in heritage management; as a result, management issues have had a high profile within the discipline. Historical archaeologists in Australia were instrumental in developments such as the Burra Charter, a code of practice for all heritage professionals, and the charter has subsequently been a significant influence shaping the direction taken by archaeological work (Birmingham and Murray, 1987; Pearson and Sullivan, 1995; Pearson and Temple, 1983; Sullivan and Bowdler, 1984). Responding to the charter's call for study through the least possible physical intervention (Marquis-Kyle and Walker, 1992), survey replaced excavation as the primary form of fieldwork in both Australia and New Zealand as a range of government and nongovernment agencies undertook regional and thematic studies to compile inventories of heritage places (Smith, 1991). Maritime archaeologists similarly shifted to inventories and site recording, which resulted in the creation of a national shipwreck database that includes all wrecks in Australian territorial waters (Hosty and Stuart, 1994). However, excavation did continue, much of it also in response to the needs of heritage management. Major projects took place at such sites as First Government House in Sydney and the convict penitentiary settlement of Port Arthur in Tasmania. Both are places of considerable historical significance that have captured the public imagination, and these projects kept historical archaeology on the agenda and provided training for a generation of archaeologists.

By the mid-1980s, historical archaeology in Australasia had matured sufficiently as a discipline to

generate a number of self-reflective reviews of the field (Bairstow, 1984a, 1984b; Birmingham and Jeans, 1983; Connah, 1983; Jack, 1985; Megaw, 1984; Murray and Allen, 1986). Most of these pointed toward a preoccupation with lists and description, with little thoughtful analysis of the data accumulated—a process Connah described as "stamp collecting." A lack of theoretical development was identified as the central problem facing the discipline. In part, this can be attributed to limited academic participation in the field. Egloff (1994) noted that between 1983 and 1991, 80 percent of the articles published in *Australasian Historical Archaeology* were by contributors employed outside of academia. This in turn is related to the small number of university-based historical archaeologists and the relatively small number of Ph.D. theses completed in the area. Less than a half dozen academic archaeologists in Australasia could be identified as having all or most of their research within historical archaeology, and until recently, there were none in underwater archaeology. In recent years, however, both the number of Ph.D. theses and the number of academic archaeologists have increased dramatically (Mackay and Karskens, 1999).

Despite the similar developmental trajectories followed by historical and maritime archaeology in Australia and New Zealand, there have been few formal alliances until fairly recently. The first major steps toward ending that isolation were taken in 1990, when the annual ASHA conference was held in New Zealand. In 1992, the links across the Tasman were formally acknowledged when the names of the society and of the journal were altered to reflect the regional focus, becoming the "Australasian Society for Historical Archaeology" and *Australasian Historical Archaeology,* respectively. In 1992, the annual conferences for ASHA and AIMA were held consecutively in Sydney, but it was not until 1995 that the first joint conference of the two associations was held. Further recognition of trans-Tasman maritime links came in 2001, when AIMA became the "Australasian Institute for Maritime Archaeology." More recently, several collaborative research projects have begun that explicitly incorporate approaches from maritime and terrestrial archaeology. These include work on the *Bounty* mutineers on Pitcairn Island and on the wreck of the *Pandora*, and on the whaling industry in Australia and New Zealand.

Key Issues and Sites

The following discussion includes a number of case studies that have been selected to illustrate significant subjects of research in Australasian historical archaeology (Figs. 1 and 2). These studies are presented in an order that is deliberately "Whiggish," and this has been done for a number of reasons. By arranging them in chronological order, it provides some sense of the region's history for those readers unfamiliar with it. However, it also reflects the development of disciplinary interests and approaches that have, over almost 40 years, broadened from an initial preoccupation with describing "early" sites to one that encompasses a wide range of study areas and research questions.

Early European Contact: The Batavia

Some of the earliest excavations on European sites in Australasia were those that investigated the four VOC shipwrecks off the Western Australian coast (Green, 1989; Henderson, 1986). The best preserved of those wrecks was that of the *Batavia* (1629), excavated between 1973 and 1976 and now on display at the WAMM in Fremantle. Archaeological work on the *Batavia* played an important role in bringing underwater sites to the attention of governments, museums, and the Australian public, in addition to foregrounding a colorful but largely forgotten period in Australian history.

The *Batavia* was on its maiden voyage from the Netherlands to the Dutch colony of Batavia (Jakarta) when it struck a reef off the Abrolhos Islands, Western Australia, in 1629. The surviving passengers and crew made camps on the islands, and the captain and several crew continued to Java in a longboat in order to get help. During their absence, a mutiny occurred on the islands, and 125 people were massacred before the captain returned. As a result of the notoriety of the saga, there is a good documentary record, including an account published by a survivor of both wreck and mutiny. The wreck was relocated in the early 1960s by amateur divers and later excavated by a team led by Jeremy Green from the WAMM (Green, 1989). They found the site to be remarkably intact, despite the high-energy reef

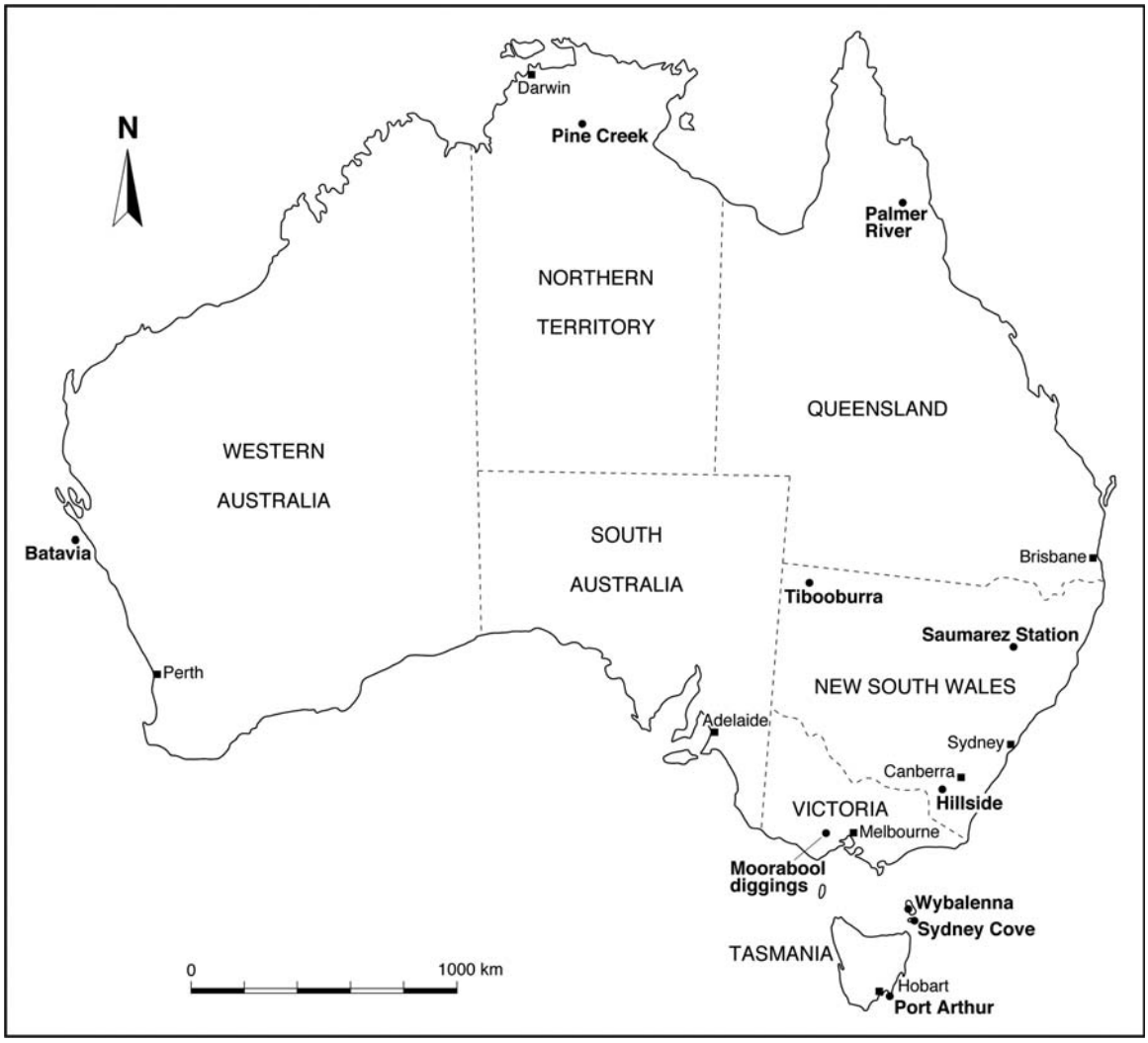

Fig. 1 Map of Australia showing major sites mentioned in the text (drawn by Ming Wei)

environment in which it lay. In addition to numerous artifacts, including 28 cannon and 9 anchors, the team found a substantial portion of the hull. Timbers from the stern of the ship that had survived beneath the coral were raised and conserved and are now on display at the museum in Fremantle. Also on display is a 7.5-meter-high sandstone arch carved and prefabricated in the Netherlands and intended for the gate of the Dutch fortress at Batavia.

Other artifacts have shed light on Dutch trade in the east. Included in the cargo were such specially commissioned items of silverware as ewers, betel boxes, fan handles, and tablewares, all in Muslim designs and intended for trade with the Muslim elite. More recent work has investigated several of the burials associated with the *Batavia* massacre (Paterson and Franklin, 2004). The excavation of the *Batavia* and the other three VOC wrecks was significant for what was revealed about the ships, their crew, passengers, and cargoes. Interest in the wrecks was such that their discovery led directly to the passage of the first legislation protecting underwater sites, the establishment of the WAMM, and the foundation of maritime archaeology in Australasia. The majority of maritime archaeologists now working in the region received their training through the WAMM and Curtin University, and the influence on Australasian archaeology cannot be overestimated.

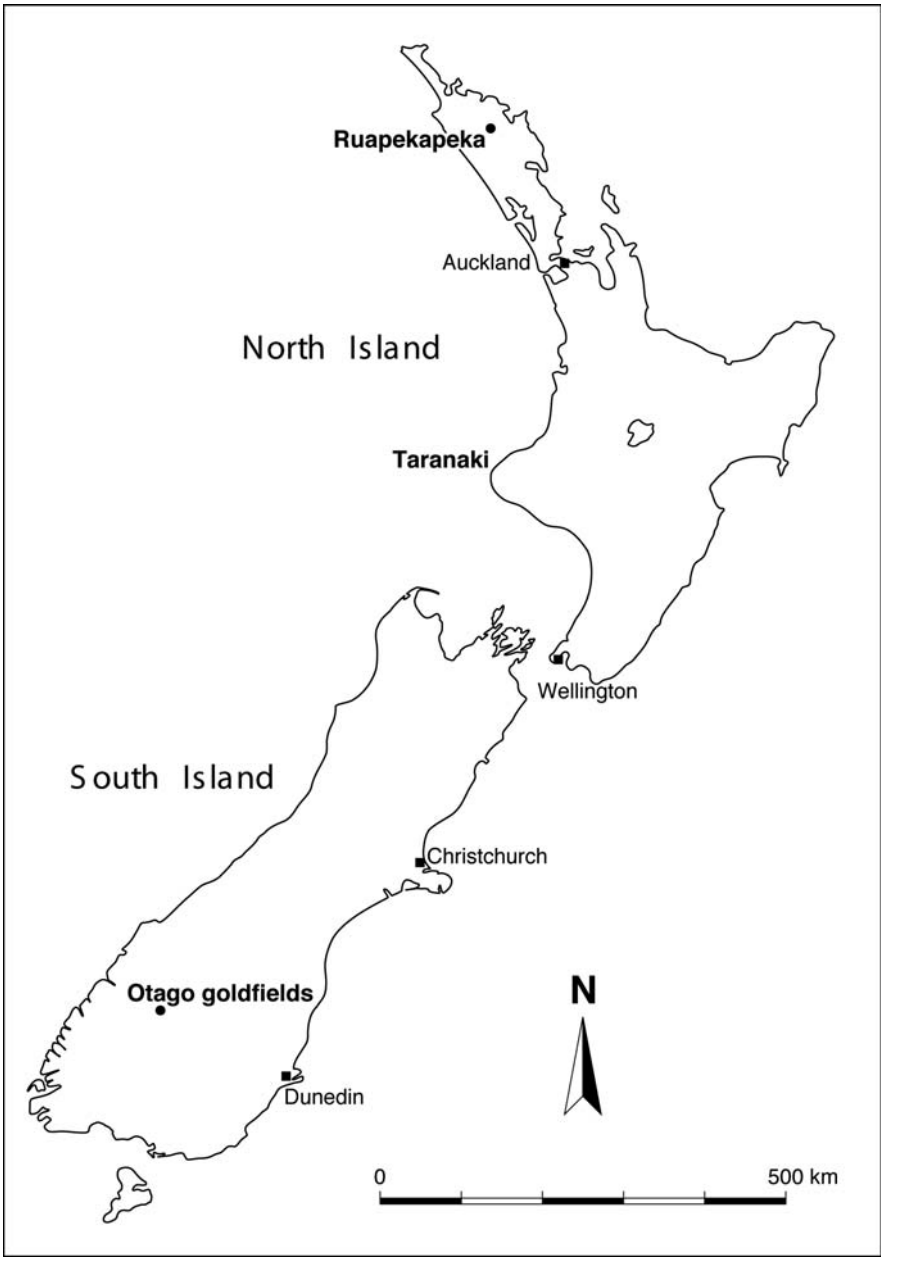

Fig. 2 Map of New Zealand showing major sites mentioned in the text (drawn by Ming Wei)

Contact Sites: Wybalenna and the Taranaki Wars

The study of postcontact, indigenous sites has an equally long history in Australasia. One of the first colonial-period sites to be excavated by archaeologists at the University of Sydney was that of Wybalenna, the Aboriginal mission on Flinders Island in Bass Strait. Between 1835 and 1847, the mission was occupied by the Aboriginal Tasmanian people who were removed from mainland Tasmania by the British government at the end of the long Tasmanian Wars of the 1820s and 1830s. In 1969 and 1971, a team of archaeologists under the

direction of Judy Birmingham carried out two field seasons of salvage excavations (Birmingham, 1992). The mission was a self-contained settlement with bakery, gardens, hospital, church, lumberyard, stone quarry, and quarters for British staff and for Aboriginal people. Archaeological excavations centered on 5 of the 20 brick terraces built to house Aboriginal residents. Preliminary reports of the excavations noted that, in addition to European artifacts, there was bone from native animals, worked glass, stone flakes, and tiny shell beads used in traditional necklaces (Birmingham, 1976). Analysis showed that at Cottage 8 the artifact assemblage was dominated by items of European manufacture, while at Cottage 7 the assemblage contained more Aboriginal goods. In her later analysis of the site, Birmingham (1992) argues that these distributions indicate differing strategies of resistance on the part of the Aboriginal people, some of whom took on at least some European ways, while others retained traditional hunting practices and diet.

In New Zealand, influential research on contact sites has been carried out by Nigel Prickett, initially for a Ph.D. thesis at the University of Auckland (Prickett, 1981, 1992, 1994). Prickett conducted a program of survey and excavation that examined military sites associated with the Taranaki Wars of the 1860s and 1870s. In these campaigns, the Maori waged a sophisticated but ultimately unsuccessful war of resistance against British invasion. The separate fortifications built by the Maori and the British clearly demonstrate the different tactics employed by each force. Maori strategy was one of defense, in which significant enemy losses resulted from attacks against secure positions. Forts, or *pa,* constructed by the Maori incorporated traditional expertise in sophisticated earthwork construction and the use of strategic positions that was derived from centuries of warfare in New Zealand. Changes in the form of what Prickett has called "musket *pa*" indicate shifts in the tactics employed, brought about by the use of such new weapons as muskets and artillery. Formerly located on high ground to make access difficult, *pa* were now built in level areas that were not such visible targets for bombardment and contained reinforced bunkers and connecting trenches, while bastions were added in order to provide covering fire for the defenders (Fig. 3). In contrast, the military structures built by the British served primarily as garrisons in occupied country rather than to provide battlefield advantage. The fortifications consisted of earthwork redoubts, timber stockades, and blockhouses, or individual fortified buildings, all of which served to house troops who provided protection to advancing zones of farming settlement.

Prickett's work highlights an approach that recognizes the ongoing nature of contact and postcontact interaction as a cultural process rather than as a discrete, bounded event. As has always been the case in New Zealand, Prickett's emphasis has been on documenting and explaining cultural change over the long term. The integration of contact sites into a continuum with pre- and postcolonial periods has much to offer a historical archaeology of Aboriginal Australia. Several recent projects, among them Jane Lydon's (2005a, 2005b) work on Aboriginal missions and reserves in nineteenth-century Victoria, Angela Middleton's work on Maori missions in New Zealand (Middleton, 2008), studies of pastoral landscapes in the Kimberly (Harrison, 2002, 2004a, 2006) and Pilbara (Paterson, 2006), New South Wales (Byrne, 2003; Harrison, 2004b), and Central Australia (Paterson, 2005, 2008), and work in northwestern Tasmania (Murray, 1993; Williamson, 2004) indicate that it is becoming more commonplace in Australia to consider Aboriginal culture since 1788 in this light.

Convicts: Port Arthur

Convict transportation to Australia ceased only in 1868, and convicts were never sent to New Zealand. Understandably, there has been a considerable amount of work undertaken on the archaeology of crime and punishment. Archaeologists have investigated numerous aspects of the penal system, including the wrecks of convict transport ships such as the *Hive* (Nutley, 1995), convict accommodation such as Hyde Park Barracks in Sydney (Crook and Murray, 2006a), and huts in Parramatta, New South Wales (Higginbotham, 1987), places built by convicts such as the Great North Road in New South Wales (Karskens, 1984, 1986) and the bridge at Ross, Tasmania (Byrne, 1976), and penal settlements such as Sarah Island, Tasmania (McGowan, 1989; McIlroy, 1989), as well as colonial goals, such as that at Fremantle,

Fig. 3 Ruapekapeka *pa* (1845–1846). This is one of the best preserved of the early "musket" *pa*. Protection against ball was provided by a double palisade or stockade of hardwood, the location of which is shown by the perimeter trench. Within the enclosure, pits roofed with hardwood and earth provided protection from shell and rocket fire (photograph by Kevin Jones, courtesy Department of Conservation, New Zealand)

Western Australia (Bavin, 1996). While research has overwhelmingly focused on male convicts, recent work at the Ross Female Factory (Casella, 2000, 2002) has begun to investigate the experiences of female convicts.

The most famous convict site in Australia is that of Port Arthur, Tasmania, a penal settlement that operated between 1830 and 1877. Port Arthur was a place of secondary punishment for convicts who committed offences while in the colony. When convicts from Britain arrived in Sydney or Hobart, they were housed temporarily in barracks where they were employed at such tasks as road building or stone breaking while awaiting placements with private employers. Their work and opportunities for rehabilitation, as James Kerr (1984) has argued, were mediated by a sequential system of incentives and disincentives. If convicts behaved well, they were rewarded with increasing freedom and responsibility and were eventually granted tickets of leave, similar to parole. However, if they were insubordinate, absconded, or committed other offences, they were punished by being placed in

work gangs, in chain gangs, and finally were sent to penal settlements such as Port Arthur.

Located on the isolated Tasman Peninsula southeast of Hobart, Port Arthur included barracks for the prisoners; quarters for their military guards, the officials, and their families; and work areas. It featured a prison for repeat offenders based on the leading ideas in penal reform of the time, with a church, a hospital, ornamental and market gardens, and a variety of industrial establishments—including a shipyard, a timber yard and saw pits, lime-burning and brick-making facilities, and a flour mill. A separate part of the penal settlement, Point Puer, was maintained for juvenile offenders (Jackman, 2001). In the 1970s, the site was acquired by the Tasmanian government, which in 1979 began a major program of conservation and restoration. Archaeological investigation was a significant component of this project (Egloff, 1984). The nature of the cultural-management objectives directed most work toward establishing site inventories and assessing site significance, and limited the amount of other research that took place. However, the archaeological program had a significant impact on historical archaeology in Australia in a number of ways. First, it initiated summer field schools that ran throughout the 1980s and provided training for historical archaeologists now in senior positions around the country. Second, it contributed to developing methods of site recording and excavation, particularly of standing structures (Davies, 1987), and it resulted in the publication of the *Port Arthur Procedures Manual* (Davies and Buckley, 1987), which remains a standard reference text for many practitioners. Since 1998, a new program of summer field schools has emphasized the research potential of the site, and the maritime heritage of Port Arthur has also been documented in monograph form (Tuffin, 2004).

Wealth and Power: First Government House

The oldest colonial site in Australia is that of First Government House in Sydney. Sandstone footings from the building, constructed only 6 months after the landing of the First Fleet at Sydney Cove in 1788, were uncovered during salvage excavations in 1983. As the site is now in the heart of Sydney's central business district, the unexpected survival of the footings caused consternation to the developers and delight to archaeologists and the public (Bickford, 1991, 1996). The discovery occurred only 5 years before Australia's 1988 bicentennial, at a time of great public interest in the colonial past. The subsequent furor over the site and the long campaign to save it, including massive public rallies and petitions from around the country, had a number of results. Further building on the site was halted, and a large-scale archaeological excavation conducted before the remains were again sealed beneath a paved courtyard. The Museum of Sydney, dedicated to curating and interpreting the remains, was built adjacent to the site; the public profile of historical archaeology was significantly raised.

The First Government House site provides intimate glimpses into the lives of those most closely involved with the running of the colony during the early years of settlement. The building was initially constructed as a three-room house and was expanded many times over the years. It served as the seat of government and the home for the governor and his family from 1788 until 1845, when a larger residence was built in the Government Domain and the first house was destroyed (Proudfoot et al., 1991). Archaeological evidence indicates that those at the governor's house dined elegantly and well, even during the starving times of the first few years (Lydon, 1996:149). Articulated cattle hocks from 1788 deposits demonstrate that, despite severe food shortages, bones were casually discarded with edible meat still on them. Luxury and fine living marked status and influence, and later governors perpetuated those patterns. Refuse from the deposits of the 1820s show that the governor's guests were served tender suckling pig and good Bordeaux wine at a table set with porcelain and delicate glasswares (Crook and Murray, 2006b:38–49).

Those who ate at the governor's table were from the elite of colonial society, but the site also provides plentiful evidence of the experiences of others who lived and worked in or about the house. The convict men and women assigned as servants spent much of their time in the area to the rear of the house where stables and outbuildings were arranged in a walled courtyard. These stone and timber structures were built in 1788–1789, and by 1816 they were already

described as "being in a decayed and rotten State . . . [and] Exhibit a Most ruinous Mean Shabby Appearance" (Governor Macquarie, quoted in Proudfoot et al., 1991:99). A collection of artifacts found in the fill of a hole dug to repair the house's drainage system showed that at least part of the courtyard was overgrown and strewn with broken pieces of pottery, glass, clay pipes, and other refuse (Proudfoot et al., 1991:114). Also located in the courtyard was the colony's first printing office, situated in one of the outbuildings and operated by a succession of convict printers. During the archaeological excavations, several pieces of printing type were recovered from a drain under the printing office (Proudfoot et al., 1991:75–79). The loss of the type must have been of some concern, as this was the only printing press in the colony at the time.

Trade to the Colonies: The Sydney Cove

Australia and New Zealand were colonized by the British, and while most goods came from Britain, the colonies also had ties with other parts of the world, including their neighbors in Southeast Asia. Ships involved in the "country trade" sailed regularly among ports in India, South Africa, and Asia (Staniforth, 1996). One such ship, the *Sydney Cove,* was on its way from Calcutta to Port Jackson (Sydney) when it sank off the Tasmanian coast in 1797. The excavation and analysis of the ship and its cargo has provided an opportunity to examine trade to the colony. Although run by the Tasmanian Parks and Wildlife Service and the Queen Victoria Museum in Launceston, as is typical of maritime projects in Australia, the *Sydney Cove* excavation has been made possible by the contributions of professional maritime archaeologists from around the country, together with volunteer divers (Nash, 2001). The camp of the shipwreck survivors has also been the subject of recent archaeological investigation (Nash, 2005).

Country traders usually had crews of Indian and Southeast Asian men, or Lascars, and the *Sydney Cove* was no exception. Documents show that the ship sailed with 10 European (mostly British) officers and crew, and between 43 and 47 Lascars (Strachan, 1986:4). Some, perhaps all, of the Lascars were from Bengal, and all were probably either Hindu or Muslim. They brought with them their own dishes and cookware, and cooked and ate their meals separately from the Europeans aboard the ship. Several vessels of coarse earthenware, probably of Indian origin, were represented in the ceramics recovered from the wreck (Strachan, 1986:79–83). Some of the vessels were large, gray-paste storage jars stowed in the stern of the ship, while others were shallow, red-paste bowls with slipped interior surfaces that were used for preparing and serving food (Fig. 4). The diet was

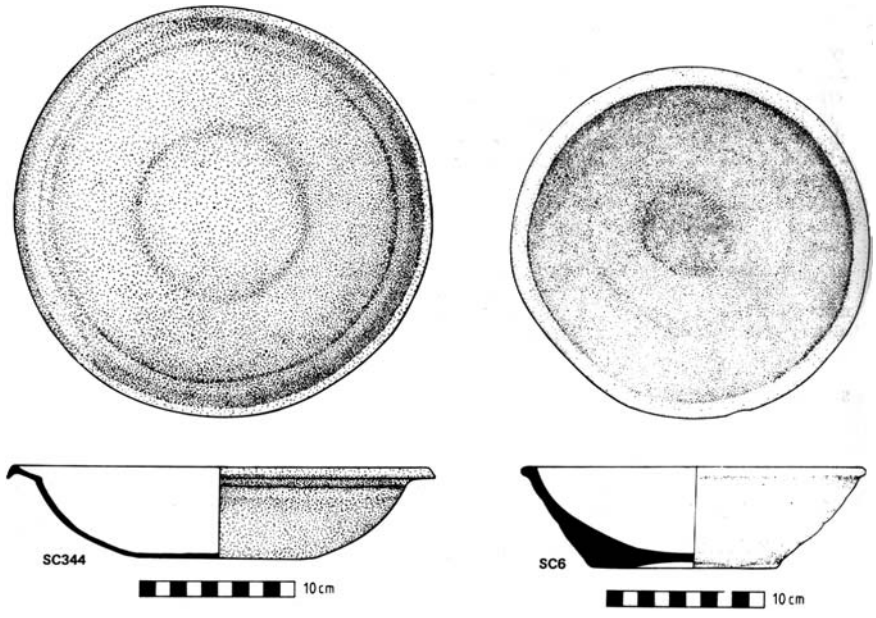

Fig. 4 Coarse earthenware vessels used by the Lascar crew on the *Sydney Cove* (1797). Vessel on the *left* is a mold-pressed bowl with traces of brown-black slip on the inside. Vessel on the *right* is a wheel-thrown bowl with red-brown slip on the inside and under the lip (drawn by Shirley Strachan; from Strachan, 1986; reproduced by permission)

primarily rice with some smoked meat and, as a brass fishhook was found in the survivors' camp, possibly fish caught during the voyage (Strachan, 1986:5).

The cargo carried by the *Sydney Cove* contained products from many places: rum, tobacco, leather shoes, salted meat, and indigo from India; tea and porcelain from China; and wine, beer, and cider from Europe (Nash, 2001:121–142). Most of these goods, such as the salted meat, were necessary provisions of which the colony in the early years was desperately short. Other goods, such as alcohol and tobacco, were speculative items intended for a luxury market. Porcelain, which is often considered a luxury product, at this period met a broader need in the colony, which was short of ceramics of any kind. The cargo of the *Sydney Cove* included teaware sets of matching bowls and saucers; dinner plates and warming plates; and toiletry sets of chamber pots, basins, and water flasks (Staniforth and Nash, 1998). Fragments of identical vessels have been recovered from archaeological sites in Sydney, including First Government House and Cumberland Street in the Rocks. At the latter site, fragments of porcelain tablewares, teawares, and toiletry sets have all been found in pre-1815 contexts associated with the residence of an emancipated convict, butcher George Cribb. As Grace Karskens argues, the people of the Rocks were "very materially minded," and even at that early date were beginning to accumulate wealth and to adopt attitudes to hygiene more commonly associated with the later Victorian era (Karskens, 1999:48–74).

The Overseas Chinese: Goldfields and Market Gardens

The first Chinese in Australasia were brought to New South Wales as agricultural laborers in the 1840s, but it was not until the gold rushes of the 1850s that large numbers of Chinese arrived in the colonies. The first archaeological study of the Chinese in Australia was conducted in 1982 (Jack et al., 1984), and since that time a considerable amount of work has been done on Chinese sites, primarily from a cultural-heritage-management perspective (Ritchie, 2003). The most comprehensive research has been done in New Zealand, where Neville Ritchie (1986) led a long-term project studying the Chinese on the goldfields in Otago. The Otago region on South Island was an important gold-mining region from 1861, and attracted Chinese miners, initially from Australia, from 1865 onward (Ng, 1993:161).

Ritchie carried out excavations at 26 occupation sites. Artifacts demonstrate that, as in many overseas Chinese communities, a long-distance trade network was maintained between Otago and China (Ritchie, 1993:341). Storekeepers such as Ah Lum, who ran a store and gambling shop in Arrowtown for 25 years, imported rice in sacks from China and Java. Other foods from China—such as dried vegetables, preserved ginger, pickled garlic, radishes, and lemons—were imported in wide-mouthed ceramic jars, while soy sauce and vinegar came in spouted pots and narrow-necked jars (Piper, 1988:39). All of these containers, known as Jian You wares, were made of coarse, gray earthenware with a brown glaze (Ritchie, 1986). Chinese coins called *cash* have also been recovered, singly and in groups of up to 210, from sites on the goldfields. Ritchie and Park (1987) have used their small number and distribution to argue that the coins were most probably used as gambling tokens in games such as fan-tan rather than as currency and that the overseas Chinese economy was based on the standard local monetary system.

Ritchie's (2003) recent review of overseas Chinese archaeology in Australasia noted the growing academic and community interest in temples, graves, stores, gardens, mines, and camps, and the potential of such places for revealing the contributions made to colonial society by Chinese immigrants (Grimwade, 2003; Smith, 2003). Stanin's (2004) investigation of a Chinese market garden, for example, explores the daily lives of Chinese immigrants on the Victorian goldfields near Castlemaine in the nineteenth and early twentieth century. Archaeological evidence from the site indicates a complex system of roads, vegetation, terraces, and household debris. The modest domestic assemblage of stoneware bottles and jars and celadon bowls and cups suggests that the men were accumulating relatively few goods and sending their money back to China. The remains of the gardens themselves, with parallel rows and furrows dug to the very edge of the property, the lack of internal fences, and traditional

Chinese rectangular wells, indicate the persistence of Chinese agricultural methods in the new environment, along with the importance of frugality and cooperative labor.

Industrial Archaeology: Community Studies at the Moorabool Diggings

Studies of technology and of particular industries have always been important in the archaeology of Australia and New Zealand (Birmingham et al., 1979, 1983). There have been investigations of lime burning (Harrington, 2000; Pearson, 1990), salt making (Rogers, 1984, 1993), eucalyptus-oil distilling (Pearson, 1993), whaling and sealing (Gibbs, 1995, 2005; Kostoglou and McCarthy, 1991; Lawrence and Staniforth, 1998; Pearson, 1983; Prickett, 2002), and iron smelting (Jack and Cremin, 1994). Most prominent have been studies of metal mining, especially gold, copper, silver, and tin. Copper was the first metal to be mined commercially in Australasia, with mines opening in South Australia and at Kawau Island, New Zealand, in the 1840s. The gold rushes beginning in 1851 in New South Wales and Victoria, and in 1858 in New Zealand, transformed colonial economies and societies. From that time mining has taken place in every state and territory in Australia and across New Zealand. Much of the emphasis in mining studies has been on the technological processes involved and directed by the need to produce cultural-heritage inventories. These studies have recorded such features as battery, mill and smelter sites (Bannear 1988; Clough, 1989, 1991; Davey, 1986; Gibbs, 1997); engineering works (Bell, 1986; Milner, 1997; Wegner, 1995); and tailing patterns (McGowan, 1996; Ritchie, 1981).

Other mining research has taken a community-studies approach, investigating the people who lived and worked at the mines. One such study is that of the Moorabool diggings in Victoria, where an archaeological project was carried out in the early 1990s (Lawrence, 1995, 2000). There, a pattern of subsistence mining has been identified on small fields that were identified by contemporaries as "poor man's diggings." The Moorabool diggings are typical of this kind of mining: the alluvial (placer) gold deposits were not sufficiently rich to sustain a large industry, but they were enough to support a small number of miners on a semipermanent basis throughout the 1860s and 1870s. In order to supplement their incomes from working the gold, miners also took on such other laboring jobs as shearing and road building. Family groups were of critical importance in making subsistence mining successful, because while husbands and sons commonly worked as miners and laborers, wives and daughters ran small-scale family farms that provided vegetables and dairy products for the table and for sale to supplement income.

On the Moorabool diggings, census records show that women and children made up over half of the population. Their roles in the community are seen in a number of ways in the archaeological record (Lawrence, 1998, 1999). Women's clothing and jewelry were represented in assemblages at two of the four houses excavated. The houses were all simple, one-room structures of canvas and timber with rough stone and mud fireplaces, but the assemblages had evidence of genteel furnishings—including floral wallpaper, a brass mantel-clock case, and considerable quantities of transfer-printed ceramic table- and teawares. Faunal remains, including those of chicken, mutton, beef, pork, and eggshell, all acquired locally, also suggest the labor of women and children in producing food on small plots of land that accompanied mining leases. This detailed study of everyday life presents a significant challenge to traditional constructions of the goldfields as predominantly masculine, rough-and-tumble environments.

Rural Settlement and Technology

It was once said of Australia and New Zealand that each rode to prosperity "on the sheep's back," and despite what has always been a largely urban population, pastoralism has long underpinned myths of national identity. Studies of the material remains of the pastoral industry have emphasized adaptations to new environments, particularly in the Australian case over difficulties with water. Australian rivers are prone to flooding in the wet season, yet in the dry months water shortages can be severe. Graham Connah's 1983 study of Saumarez Station on the

New England Tablelands of New South Wales analyzed ways in which these considerations were balanced (Connah, 1983). Wool had to be washed before shipping in order to reduce weight and bulk, and the traditional method of doing this involved bathing the sheep before they were shorn. This meant that the earliest shearing facilities at Saumarez in the 1840s had to be located in the river valley despite periodic flooding. However, changes to technology and work practice meant that by the end of the nineteenth century it became possible to move the facilities to higher ground. It became the norm to scour the wool after shearing instead of before, and at the same time the widespread introduction of corrugated, galvanized iron roofs and water tanks made water storage elsewhere more feasible. Excavations at an 1897 wool scour at Mount Wood Station near Tibooburra in arid western New South Wales provide further details on the scouring process and showed the lengths gone to in order to save water (Pearson, 1984). There, an elaborate system of dams, pipelines, and ditches enabled water used in the washing process to be saved and reused.

For agriculturists, water provided a vital source of power for the milling of wheat. Water-powered flour mills are most common in New England and Tasmania, where there was sufficient rainfall to make them feasible. In a detailed study of nineteenth-century mill technology, Warwick Pearson (1998) has demonstrated that while technology was largely imported from Britain, its successful adoption was dependent on a complex blend of economic, environmental, industrial, and cultural factors. Australian mills are more utilitarian in appearance than are British mills and are less likely to include such expensive materials as brick in their construction, with locally available wood and stone being favored, instead. In adapting to Australian conditions, the technology used in the mills was drawn from a combination of upland and lowland British traditions. Some aspects of upland tradition, such as the use of long races and overshot wheels, favored the small-scale markets and environmental conditions found in Australia, but at the same time, the small labor force and dispersed nature of the markets in the colonies meant that the industry was highly mechanized and that mills incorporated large storage spaces, as was common in the lowland British tradition.

Surviving nineteenth-century settlement patterns in rural Australia are the result of prolonged struggles between large-scale pastoral interests and small-scale farmers and selectors (Stuart, 2007). This struggle, and lines of power within colonial society, has been delineated by Jonathon Winston-Gregson (1984) in a study of abandoned villages in southern New South Wales. Three headstones in a paddock, located during a field survey, provided the first clues that what was now a very thinly populated area had formerly supported many more people. Further research suggested that as many as 140 people may have been buried in the cemetery and brought to light the settlement of Hillside. Between the 1850s and 1890s, the village provided a range of services to a dispersed population of small holders engaged in activities that included mixed farming, wine making, and gold mining. Winston-Gregson (1984) argues that the nucleated form of the village was the result of aggressive land acquisition policies on the part of the powerful owners of the large sheep stations in the region. By purchasing small allotments on the boundaries of their pastoral leases, the station owners exercised control over the best land in the district, and so prevented the small farmers from operating successfully.

Urban Archaeology at the Rocks

Urban archaeology has been increasing in importance since the 1980s, as cultural-heritage-management concerns have led to mitigation on urban sites prior to their development and as scholars have taken a greater interest in the development of urban environments. Large-scale excavations have taken place on inner-city sites in Melbourne (McCarthy, 1989; Murray, 2004a, 2006; Murray and Mayne, 2001, 2003), Adelaide (Austral Archaeology, 1992), Hobart (Austral Archaeology, 1995), and Auckland (MacReady, 1991). The greatest amount of work has been done in Sydney, Australasia's first urban center. The harbor-front area known as the Rocks has been of particular interest, in part because of its historical significance as the neighborhood that was home to Sydney's early convict residents, and in part because its present popularity as a tourist precinct has led to considerable

redevelopment projects that have been preceded by archaeological excavation.

One such project was that commissioned in 1994 by the Sydney Cove Authority. Heritage consultants Godden Mackay, in association with historian Grace Karskens, were engaged to carry out a major excavation of an area of the Rocks between Cumberland and Gloucester Streets (Fig. 5). Then a vacant lot, it had formerly been a thriving neighborhood of shops, houses, and hotels arranged along narrow lanes and alleyways. The research design for the project addressed a number of key themes in urban social and cultural history that had previously been identified by Karskens and Thorpe (1992). These related to the impact of the Industrial Revolution, women's lives and occupations, standards of living among urban working people, the rise of governance, and the identity of the Rocks as a culturally separate space. Evidence from the 46 buildings excavated and the more than half million artifacts recovered, integrated with historical research both detailed and broad in its scope, has contributed new perspectives that counter preexisting stereotypes of the area as a notorious slum and bring to life the previous residents of the Rocks (Crook et al., 2005; Karskens, 1999, 2003).

One house excavated from the early phase of settlement (ca. 1788–1830) was that of George Cribb, a butcher and former convict. The tiny yard had served as his work area, and it was piled with animal slaughter waste—including heads, horns, and limbs—that demonstrated preindustrial work patterns combining work and domestic space, the butchering of animals in large chunks rather than in discrete cuts, and a diet that favored tongue and brain (Karskens, 1999:54–55). A well cut into the sandstone bedrock had been filled in 1815, and among the artifacts were ceramics representing a complete Spode dinner service, an indication of Cribb's growing wealth and aspirations. Later deposits at Cumberland Street demonstrated the complexities concealed by the simplistic and misleading label of "slum" used to describe the Rocks from the 1850s to ca. 1900. Despite their often limited incomes, people had up-to-date clothing and tableware, as well as fancy jewelry. They had scientifically gathered collections of shells, "moralizing china" for children (decorated with mottoes that emphasized good behavior and such values as industry and frugality), and hygiene products such as toothbrushes and toothpaste. At the same time, families with up to 12 children lived in cramped houses with little outdoor space and commonly disposed of refuse, including meat scraps, under floorboards. Insights such as this are being made accessible to the public through a variety of publications, Web sites, and museum displays.

Fig. 5 Archaeological excavations at Cumberland Street, in Sydney's the Rocks neighborhood (photograph by Patrick Grant, courtesy Godden Mackay Property, Ltd., and the Sydney Cove Authority)

Future Directions

The beginning of the twenty-first century is a period critical for historical and maritime archaeology in Australasia, in which significant challenges within and beyond the discipline must be met. Externally, a climate of economic rationalism is making it more necessary than ever that archaeology be able to justify its relevance in public culture. Funding levels to universities and cultural-heritage agencies are decreasing, with the twin results of reducing the amount of money available with which to conduct research and maintain heritage fabric and reducing the number of archaeologists employed to undertake those research and management tasks. In a 1994 review of historical archaeology in Australia, Brian Egloff wrote of the failure of the discipline to make "a sufficient intellectual contribution to issues of interest to our contemporary society" (Egloff, 1994:4). If this failure is not addressed, there is the

very real possibility that public support, at least financially, will cease to exist. More recently, Mackay and Karskens (1999) and Murray (2002) have argued that the well-being of the profession is connected to its capacity to persuade others of its relevance. Encouragingly, however, there are no indications of decreasing public interest in archaeology or its results. Many thousands of people visited the Cumberland Street excavations in Sydney and the Casselden Place excavations in Melbourne, while travelling exhibits about excavations on the wrecks of the *Sydney Cove* and the *Pandora* have been similarly well received. This interest must be encouraged through improved communication with, and involvement by, members of the public regarding archaeological perspectives on the past.

Internally, the challenges continue to be those of developing methodological and theoretical sophistication. These were identified in the 1980s and have been noted again at regular intervals (Bairstow, 1991; Brooks, 2005; Connah, 1988, 1998; Crook et al., 2002; Egloff, 1994; Iacono, 2006; Jack, 1993; Lydon, 1999; Mulvaney, 1996; Murray, 2002). Over this period, field methods have been addressed to some extent (Balme and Paterson, 2006; Birmingham and Murray, 1987; Burke and Smith, 2004; Davies and Buckley, 1987; Higginbotham, 1985), but the analysis of material culture continues to suffer, in part because of a mistaken belief that what is encountered on sites in Australasia is not markedly different from that described in the literature from North America. An exception is Brooks's (2005) guide to British ceramics in Australia, which carefully identifies the pottery forms, fabrics, and makers normally encountered on Australian sites. One of the most significant barriers to the development of methodological and theoretical approaches is the lack of sustained research within universities. While the number of academics is unlikely to increase, the number of completed doctorates has more than doubled since 1994, and as there are a number of continuing students currently completing their degrees, the prospects for the future in this area are encouraging. In addition, as the Cumberland Street project in Sydney and the Casselden Place investigation in Melbourne indicate, there are increasing indications of academic sophistication flowing into public archaeology.

Despite Egloff's (1994:4) reference to a lack of engagement with contemporary issues, research in the areas of gender (Hourani, 1990; Lawrence, 1998; Lydon, 1995), postcontact indigenous culture (Birmingham, 1992; Colley and Bickford, 1996; Harrison and Williamson, 2004; Murray, 2004b; Paterson, 2005), national identity (Ireland, 2002), and the environment (Atkinson, 2001; Davies, 2002, 2005; McGowan, 2001) have all been increasing in recent years and are emerging as significant areas of interest. Also emerging at present is a growing determination to develop research that makes explicit linkages between terrestrial and maritime approaches, as do projects on the Australasian whaling industry (Lawrence, 2006; Lawrence and Staniforth, 1998) and the *Bounty* mutineers on Pitcairn Island. While some of this shift is generational, it is also a result of a growing awareness of the truly international nature of colonization (Lawrence, 2003). There is a strong case to be made for studying connections between Australia, New Zealand, and the rest of the world, particularly the British Empire and the Asia-Pacific region, and for returning that colonial perspective to the archaeology of eighteenth- and nineteenth-century Europe.

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Above and Beyond Ancient Mounds: The Archaeology of the Modern Periods in the Middle East and Eastern Mediterranean

Uzi Baram

Introduction: Politics and Archaeology in the Middle East

Historical archaeology is a recent, and still emerging, development in the Middle East. While historical archaeology can be simply any archaeology focused on periods with documentary evidence, this chapter examines historical archaeology as the archaeology of modernity, an archaeological discourse influenced by scholars using material culture, archaeological artifacts, and excavations to expose the dynamics of the recent past. For the Middle East, the recent past is the epoch when the Ottoman Empire ruled over a region from the Black Sea to the Red Sea, from Mediterranean to the Tigris–Euphrates Rivers.

Raising the profile of the Ottoman Empire, recognizing the materiality of that great, long-lasting Islamic-Turkish world empire, confronts the nationalist narratives of its successor states. Recognizing the modern aspects of the epoch is a critique of Orientalist assumptions about the society and politics of the region. Middle Eastern archaeology, which is rooted in the last century of Ottoman rule over the Middle East, traditionally has excluded the recent past from being an appropriate subject matter for archaeological investigations. Archaeology is important in the Middle East; its national, ethnic, and scholarly significance triggers competitions over representing and understanding the past. Mapping out the emerging terrain of excavations, analyses, and publications on the historical archaeology of the Ottoman Empire requires a consideration of the history and politics of the empire and an exploration of the differing approaches to archaeological research and representation across the region it controlled.

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The Ottoman Empire: History and Perspectives of the Recent Past

The Ottoman Empire emerged in the thirteenth century, expanding across Anatolia and ruling over the Middle East and Southeastern Europe for centuries. Mehmet the Conqueror captured Constantinople in 1453, ending the long reign of the Byzantine Empire and turning the city into the capital of the Ottoman Empire. Following the Ottoman military successes in the Balkans, Sultan Selim's victory at the Battle of Marj Dabiq, near Aleppo in 1516, opened the Middle East to the Ottoman Empire. Under Kanuni Sultan Süleyman (The Lawgiver), better known in the west as Süleyman the Magnificent, the empire stretched from North Africa to Yemen, from the Persian Gulf to the gates of Vienna (Fig. 1).

Donald Quataert (2000:21) notes that under Süleyman, who reigned from 1520 to 1566, "the Ottomans are widely considered to have reached a peak of wealth and power." After Süleyman's reign, the rest of Ottoman history has been told as a time of desolation, decay, and decline. The notion of the "sick man of Europe"—a term coined by the Russian Tzar Nicholas I in 1853 to describe an assumed impending collapse—continues even in recent popular histories

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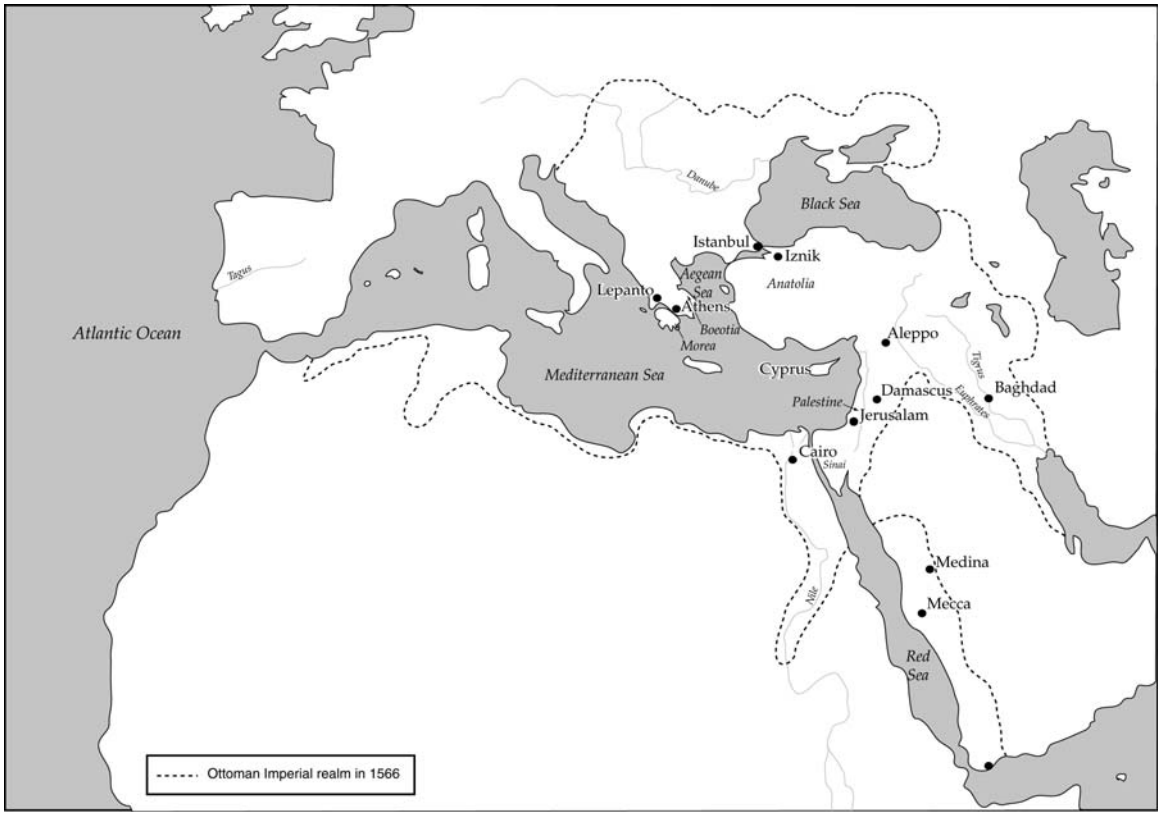

Fig. 1 Map of the Ottoman Empire at its mid-sixteenth-century territorial height (drafted by Margaret Robbins, courtesy Statistical Research, Inc.)

(the empire lasted until World War I, more than half a century after the prediction of its demise). In that tale of decline, the institutions and cultural life of the peoples of the empire were presented as degenerated or frozen in time, a discourse that Edward Said (1979) labels "Orientalism." The negative view of the Ottoman Empire is not only a western perception. The successor Arab states treat the Ottoman era as a period of alien rule, and for Balkan peoples the legacy of the Ottoman Empire is negative heritage; even the Republic of Turkey broke with the empire (Baram and Carroll, 2000a).

Middle Eastern archaeology, formed in the aftermath of the late-eighteenth-century Napoleonic intrusion during the days of the Ottoman Empire, found no reason to examine that empire. Archaeologists, seeking the ancient civilizations and evidence of the Biblical narratives, ignored the material culture of the late Ottoman period, with its continuities to the objects used from the fifteenth century onward. The traditions of focused study on the rich and complex material and documentary records of antiquity discouraged attention on the materiality of the recent past.

In the 1980s, Albert Glock (1985), Philip Kohl (1989), and Neil Silberman (1989:228–242), based on the potential they saw in historical archaeological research in North America, called for expanding archaeology from distant antiquity into the recent past. They gave particular attention to including the excavation of Ottoman-period sites. The calls for an archaeology of the Ottoman Empire came from an urge to tell a different story for the history of the region, one that could counter the repercussions of colonialism, imperialism, and Orientalism. These advocates hoped local archaeologists, of all nationalities, would recognize a shared heritage in the archaeological record of the recent past. One prominent example of such hopes of finding the commonalities of the past focused on archaeology as a source of reconciliation between Israelis and Palestinians. Such an archaeology centers on rethinking and rediscovering the recent past to reconstruct the lives of peoples—both the elite and

the commoners—of the past several centuries from the things they left behind in the archaeological record.

Glock (1985, 1994) began excavations at the Ottoman-period village of Ti'innik on top of Tel Taanach, a famous site of Biblical significance. The research program sought to be relevant to the inhabitants of the land by including recent epochs. Glock envisioned the archaeological study of the recent past as contributing to the methods and theories of archaeologies of the more distant past to provide an accurate view on the development of identities in the region. The finds and analysis from Ti'innik are discussed below.

Even with the success of archaeology at Ti'innik and other sites, a decade ago an observer of Israeli archaeology could state that excavators were avoiding or excluding the recent strata from archaeology (Baram, 2002). In the 1990s, the notion of systematic excavation attracted the attention of a new generation of archaeologists to artifacts from the upper layers of excavations. The lands that were Palestine during the Ottoman period are an important place for the historical archaeology of the Middle East because of the relative wealth of excavations and publication of Ottoman materials. Similarly, Greece and Cyprus are significant arenas for Ottoman archaeology.

P. Nick Kardulias (1994:39), in a review of historical archaeology for Greece, notes the "primacy of texts over the material record in the interpretive process." Kardulias (1994) advocates lessons from historical archaeology to influence an anthropological Classical Archaeology for Greece. His review of archaeological projects in Greece recognizes that the "neglect of the Ottoman period, and to a lesser extent the Byzantine, Frankish, and Venetian eras, brings researchers, finally, to a consideration of the sociopolitical climate within which archaeology operates in Greece" (Kardulias, 1994:48–49). As in Israel, sociopolitics is a key component for the position of the recent past in archaeological practice. Kardulias (1994:49) states this boldly: "In archaeological circles, the situation means that one does not undertake excavations of Ottoman-period sites because, in part at least, the work would conflict with important national ideological needs." Although the situation has changed, as the below examples will show, that context is part of the convergence of traditional archaeological practices and nationalism across the eastern Mediterranean and Middle East. This is seen clearly in antiquities legislation that ends during or before the Ottoman period. For instance, the British, during their Mandate over Palestine, set the year 1700 as the endpoint for archaeology. The successor states, Jordan (McQuitty, 2001:561) and Israel (Benvenisti, 2000:303), continued that policy in their respective antiquities legislation.

The third significant locale for Ottoman archaeology is Turkey. The Republic of Turkey has a wide range of archaeological projects that include the Ottoman period, including extensive archival research, art-history studies of monuments and elite wares, and settlement-pattern analyses.

Even in these countries with their developing studies of archaeological materials from the Ottoman period, there are very few projects that exclusively focus on the archaeological record of the Ottoman period. Most of the archaeological data for the Ottoman period have come from incidental components of expeditions focused on the Biblical or Classical eras or from salvage operations; only a small portion of the materials encountered gets published, and the majority of these publications are recent. Baram and Carroll (2000a) were the first to attempt a theoretical examination of those archaeological materials and projects by identifying central concerns for the archaeology of the Ottoman Empire. The studies in *A Historical Archaeology of the Ottoman Empire* (Baram and Carroll, 2000b)—covering Greece, Turkey, Israel, Jordan, and Egypt—provide examples of the regional centers of published Ottoman archaeology projects and the materials that constituted historical archaeology. This chapter surveys the developing approaches to the archaeological record, organizing recent projects toward emerging scholarly trajectories. While there are different scholarly foundation and research trajectories among the regions, this chapter seeks to integrate projects to illustrate the common contributions that can expose the histories of the former Ottoman realm.

Pathways to the Archaeologies of the Recent Past

Baram and Carroll (2000a:15–25) explored several pathways for an archaeology of the Ottoman Empire. One pathway follows the calls for the

archaeology of the Ottoman period to embody critiques of the present; the lack of research is the means to explore the ideological meaning of archaeology. Cultural anthropologists have picked up this theme in exploring the silences of history; for instance, Bauman (2004) illuminates the muffling of the recent past in the Israeli National Park of Zippori, known as the Roman city of Sepphoris. The focus on the Classical period obscures the habitation of the site up to the mid-twentieth century, even as an Ottoman-period citadel dominates the center of the park.

Another pathway uses the Ottoman period, the recent past of the Middle East, as ethnoarchaeology; the recent past, particularly with its identifiable artifacts and insights into preservation, provides an avenue to sharpen archaeological insights into the more distant past, what Ziadeh-Seely (2000) calls reverse chronology.

The archaeology of Islam is another possible disciplinary home for Ottoman archaeology. Insoll (1999) provides a framework for studying Islam via archaeology. The Ottoman Empire was the last great Muslim empire: the Sultan was Caliph, sultans sponsored construction of impressive mosques, and organizing the Hajj was a significant part of rulership. To the east of the Jordan River, way stations for the Hajj are a significant Ottoman imprint on the landscape of the Hashemite Kingdom of Jordan. While such structures are parts of an Ottoman archaeology, the challenge for the archaeology of Islam comes from using material culture to approach a world religion. While the Ottoman Empire was an Islamic empire, it was also a Turkish Empire, and the empire was part of the emerging modern world system interacting with and being influenced by global processes and events. Religion was only one facet of the cultural landscape during the Ottoman centuries in the Middle East.

The multidisciplinary approach of Middle Eastern studies, specifically Ottoman Studies, allows inclusion of any discipline. Many scholars would welcome the archaeology of the Ottoman period, in terms of artifacts and recovered settlement pattern. Beshara Doumani (1992:22), a historian of Ottoman Palestine, calls for inclusion of primary sources that contain the voices of people excluded from history: "Ottoman court records, family papers, *physical evidence*, and oral history" (italics added). An area studies approach has its merits, and there is an eager audience for archaeological insights particularly within an interdisciplinary context. Several examples for this chapter are part of regional studies. The challenge is integrating the different regional traditions, with their paradigms, toward reclaiming larger areas; the fragmenting of the Ottoman Empire seems to have created different histories.

While there are multiple, productive pathways for the archaeology of the recent past with important results, Baram and Carroll (2000a:16–18) argue for situating the Ottoman Empire within global historical archaeology. The other choice would have been to situate the archaeology of the Ottoman Empire with post-medieval archaeology, an approach from Europe that is relevant but not simply applicable to the Middle Eastern aspects of the empire. Global historical archaeology provides a large-scale perspective, with anthropological approaches to the past. In a review of historical archaeology, Paynter (2000:201) concludes that "studies in historical archaeology seek to illuminate the complex ways in which state formation, race, class, and gender structure the everyday lives and history of the post-Columbian world." These are key issues for the recent past of the Middle East, as Ottoman imperial control intersected with nationalist movements and imperialist intrigue. In addition, as Orser (1996) notes, historical archaeology provides new perspectives on the trajectories and the interconnections that contextualize objects and sites as part of the emergence of the modern world. A global historical archaeology for the Ottoman period insists on integrating places connected in the recent past but divided by guarded borders by twentieth- and twenty-first-century nation-states. Comparative studies across the region can bring out insights not possible with detailed, close examination of finds.

While there are productive debates on the meaning of historical archaeology, historical archaeology as a history from below exposes the lives of people negotiating their social positions and daily practices under imperial control. The textual traditions of the archaeologies of the previous complex societies and empires of the region (e.g., Egyptology, Classical Archaeology, and Biblical Archaeology) provide an emphasis that is not germane for the complexity

and fluidity of the Ottoman Empire. Furthermore, historians are still exploring, analyzing, and translating materials from the vast archives of the Ottoman Empire. There are gaps for many decades, and even centuries, and for many of the regions of the empire, particularly the rural areas. Furthermore, the Ottoman Empire, as an administrative body, allowed localized control; thus, there is wide variation among the practices across the vast region controlled by Istanbul. The Ottoman elite understood local conditions, allowing them to build an empire that endured for centuries. Molly Greene (2005) describes how the leadership of the Ottoman Empire, after its military conquests, would read the cultural landscape and adjust imperial rule accordingly. So rather than a simple story of Ottoman despotism and decline, by probing deeper into the history and the local variations, archaeologists can find evidence of interactions, coexistence, and fluidity among the peoples of the empire. Global historical archaeology opens an avenue to study the intersection of internal colonialism, foreign imperialism, and local agency in a global, comparative context.

Paynter's (2000:201) general concerns for historical archaeology have applications for the Ottoman Empire, particularly his call for historical archaeologists to "write innovative and provocative culture histories." There is collaboration possible since many historians of the empire have called for situating the empire in a global context (e.g., Quataert, 2000) to locate commonalties with other empires, to understand better its dynamics, and to explore and understand the origins of the present. Historical archaeology in the Middle East, as the below examples should illustrate, is beginning to contribute to those concerns. Addressing modernity under the Ottoman Empire allows interdisciplinary approaches that integrate a wide range of resources from archaeological artifacts from surveys and excavations, standing structures and landscape features, oral histories, travel accounts, imperial records and local archives, and art history, architectural studies, and social history. The archaeology of the social dynamics and political economy under the Ottoman imperial realm explores the emergence, spread, and resistance to modernity in the empire and its successor states. Vroom (2003), perceptively, titles her important study from archaeological surveys in Greece *After Antiquity* (discussed below). The archaeology of the modern period is examining the dynamics that created the contemporary Middle East.

Starting with Ottoman-Period Artifacts

Baram's (1996) first steps toward an archaeology of the Ottoman period focused on analyzing artifacts, following the steps set in North American historical archaeology. Historical archaeologists have given much energy to creating typologies for the chronology and production of clay tobacco pipes. The most distinctive object, even the hallmark of the Ottoman period, is the Turkish tobacco pipe (Fig. 2). Archaeologists have recovered fragments of the clay bowl (the stem was typically made of wood and not preserved) in the hundreds if not thousands at some sites. Rebecca Robinson (1983, 1985) used period paintings as resources for chronological typologies to organize a large collection from the Athenian Agora excavations. Hayes (1992) provided a typology for excavated tobacco pipes from Saraçhane, in Istanbul. Baram (1996) built on those analyses, using assemblages from Israel and Cyprus, to posit

Fig. 2 A clay tobacco pipe. Archaeologists consider this class of artifacts as the hallmark of the Ottoman period (courtesy Uzi Baram)

chronological and production typologies. Baram (1999) argued for interpreting the clay tobacco pipe and coffee cup sherds commonly found in Ottoman-period layers in terms of modernity, to move beyond typological concerns.

Ceramics, in general, have received a great deal of descriptive and analytical attention. Carroll's (1999) work in Turkey examines the use of blue-and-white ceramics as part of the long-term trade in porcelains and the use of localized emulations. The emulations focus on Iznik wares. Hayes (1992) describes the categories of Miletus (best known from the Iznik series), Kütahya, and Çanakkale wares. These ceramics are famous for their artistic merit. The excavations of the Iznik Tile Kilns document Iznik ceramic production (Aslanapa et al., 1989). The city of Iznik became a famous center of pottery production in the early sixteenth century. Iznik wares were soft and sandy, usually with a white slip and painted with stylized designs of flowers that ranged from blue and white to turquoise, green, purple, and black. Carroll (1999) exposes the elite choices between Chinese porcelains and Ottoman ceramic industries and their effect on the history of the styles.

Across the eastern Mediterranean and the Middle East, art history provides insights into elite wares; it is the more common utilitarian ceramics that require archaeological study. While a century of scientific excavations have created precise chronological typologies for ceramics from the Bronze and Iron Ages and Classical periods, the common wares from the recent past are grouped into vast categories. For instance, the Late Islamic period subsumes the many centuries of Mamluk through Ottoman rule. Milwright (2000), in a review of the published archaeological evidence for greater Syria, lays out a programmatic argument for further studies, including speculations on its origins of diagnosis types, but the challenges start with the creation of typologies for the common ceramics.

An important example of pottery studies comes from Robin Brown (1992), who analyzed materials from archaeological surveys on the Kerak Plateau in Jordan, with the goal of interpreting the settlement pattern from the Crusader period (end of the thirteenth century) to the late Ottoman period (the twentieth century). Her typology for the pottery divides the ceramics into three manufacturing techniques: handmade, wheel-thrown, and mold-cast. Brown's (1992:241–246) analysis of wheel-thrown versus local handmade pottery opens an avenue to use ceramic assemblages as indicators of the intersection of Ottoman policies, changing settlement patterns and distribution networks, and household activities for the study region. The general pattern, of handmade pottery replacing wheel-thrown ceramics after the sixteenth century in Kerak, is clear even if counterintuitive; though covering eight centuries of Islamic rule, the typology is more useful for the Mamluk period than for the Ottoman centuries.

Gazaware exemplifies the challenge for historical archaeology. Gazaware is the commonly recovered ceramic type across Israel; with its black or dark-gray slipped surface and gray fabric, archaeologists can readily identify and describe the type. Many archaeological reports describe the type, and travel accounts from the late Ottoman period note its use in the twentieth century. However, no one has established its origins and range of variation (Baram, 2002:23). An ethnographic attempt by the excavators of Tell el-Hesi (Toombs, 1985:106–107) to locate producers of Gazaware in Gaza failed in the third quarter of the twentieth century; the potters of Gaza designated the style as being older than their traditions. With little precisely known about the chronological origin of these common vessels, Schaefer (1989:274–275) has an intriguing hypothesis for a medieval Jordanian origin for the type, but the example should illustrate the challenges faced in organizing ceramics and strata for even the nineteenth and early twentieth centuries. When the most common ceramic forms are the least understood, there is much work to do. More progress on utilitarian ceramics comes in the Aegean, where Joanita Vroom (2005) published a field guide to post-Roman ceramics that could transform the study of ceramics from the recent past.

While clay tobacco pipes are a key tool, and ceramics in general offer the potential for unlocking the dating of archaeological layers, Kuniholm's (2000) work using dendrochronology has established a means to date Ottoman-period standing structures. Mosques, villas, factories, repairs to older buildings, and even a shipwreck have fixed construction or repair dates due to Kuniholm's studies of oaks, pines, and juniper that came from

Turkish forests. Kuniholm (2000) has solved construction questions across Anatolia for the Ottoman period.

Object-focused studies are providing temporal order and chronological typologies for field archaeologists. There are two major focal points for fieldwork across the Middle East: surveys and intensive excavations of ancient mounds. Although the focus of much of archaeology traditionally has been the Biblical and/or Classical periods, with the more recent past being typically ignored or avoided, systematic surveys and excavations often encountered Ottoman-period remains by virtue of the empire extending over the eastern Mediterranean and the Middle East for several centuries. The tops of ancient mounds often contained materials from the recent past. Archaeologists who document the remains of the recent past use that material as ethnoarchaeology, incorporate the information into the larger sequence for the region (usually to illustrate the documentary history), or employ the material evidence to explore change—whether social, economic, or political—that came with Ottoman conquest and over the Ottoman centuries. Below, several approaches to the recent past across the former Ottoman realm are discussed with case studies.

Adding the Recent Past to the Sequence

When Biblical Archaeology began in the nineteenth century, western scholars turned to contemporary Middle Eastern villages and Bedouin for examples of Biblical lifeways. The assumption was one of stasis then, but the notion of using the present for the deeper past was compatible with an ethnoarchaeology that occasionally employed lifeways that started in the Ottoman period.

Multitudes of ethnoarchaeological studies have focused on the Middle East, many of which are useful for Ottoman archaeology. For an example of an innovative focus in Jordan, Kana'an and McQuitty (1994) focus on a house built in 1910 and used through the twentieth century. The example illustrates the goals of the Vernacular Survey of the Kerak Plateau, which uses the present as a guide for the past, to expose the relationships between the built environment and the socioeconomic change. One of their contributions is the avoidance of a dichotomy created by the concept of tradition. The complexities of using previous techniques on new materials and the integration of new components of living spaces with the previous structures successfully shows the need for nuanced analysis of material culture in the Middle East.

Ethnoarchaeology implies a concern for the recent past for understanding more distant antiquity. The line between ethnoarchaeology and the archaeology of the recent past is not always clear. Ethnoarchaeology provides material evidence for the practices from the recent past. A framework for historical archaeology started when Neil Silberman (1989) observed the successes of Middle Eastern archaeology in exposing and explaining social change from the Paleolithic through the Bronze Ages, from the Iron and Classical periods to Islamic times, and he wondered why the narrative ended at the doorstep of the present. Continuing the search for explanation into the present seemed worthwhile. Many of the projects that feed into historical archaeology, by providing data and case studies, grew out of a commitment by excavators to expose all elements of the archaeological past, from bedrock to the surface.

An early example comes from Tel el-Hesi in Israel. Toombs (1985) and Eakins (1993) document Israeli military trenching in the ancient mound, as well as in a large Bedouin cemetery. Tel el-Hesi is legendary in the history of Middle Eastern archaeology since Sir William Matthews Flinders Petrie excavated the site using the systematic techniques he developed in Egypt. In the 1970s, an American team turned to Tel el-Hesi and decided to treat all components of the tell as significant, including the top layers. The results provide maps of the military trenching from the 1948 war between Israeli and Egyptian troops and the excavation of 400 Muslim burials dated between 1400 and 1800. The excavations of the cemetery required a tremendous commitment of time and resources, and the outcome provided a systemic description of burial practices and research into the history of Bedouin movements over the Ottoman centuries. Simpson (1995) has situated these results within a survey of excavated Islamic burials from Israel, Jordan, Syria, and Iraq, illustrating a

larger point for archaeologists regarding the material variation possible under a uniform religion.

The research at Tel el-Hesi is significant and enacted under scientific principles from processual archaeology. Combining a scientific concern with social concerns, the systematic excavation of Ottoman-period Ti'innik, located near the "Green Line" that divides Israel proper from Palestinian territories conquered in the 1967 war, crossed several types of boundaries. Albert Glock used the site to explore the divides between groups as well as time periods. Glock focused on the Arab village on top of the Biblical mound in his mid-1980s expedition. The expedition was the first excavation totally staffed by Palestinians, some of whom used techniques of ethnography to identity artifacts and settlement pattern. The publication of the expedition is providing significant insights into Ottoman-period material culture and rural life. The ceramic catalogs (Ziadeh, 1995) are invaluable, beginning the task of inventorying items used by peasants during the Ottoman period.

Another contribution of the research at Ti'innik focused on the analysis of site abandonment (Ziadeh-Seely, 1999). Site abandonment addresses historical issues for the cycles of settlement changes during the Ottoman period and provides theoretical support for understanding the lower levels of tells. The issue is a crucial concern for determining population and settlement patterns for Palestine over the Ottoman centuries. Ziadeh-Seely's (1999) work compares the archaeological evidence of abandonment with sixteenth-century tax registers. Those registers imply a 40 percent increase in Ti'innik's population during the Ottoman period. Three excavated houses in Stratum 6 of Ti'innik have evidence of abandonment, with cleared floors under collapsed debris. Ziadeh-Seely (1999:144) found that neighbors used the spaces as dumping grounds. This insight has important implications. Travelers to Ottoman Palestine saw a desolate landscape, and their views have structured understandings of Palestinian history. Ziadeh-Seely's work shifts the terminology; the archaeology shows that those abandoned houses were actively part of rural life.

The Ti'innik excavations were in a component of a tell, an ancient mound of many layers of history. At Tel el-Hesi and Ti'innik, the excavations included the top layers. Including the top layers of tells is becoming standard across the region. At Tel Yoqne'am, Avissar (2005) published the architecture and artifacts found on top of the acropolis of the important mound. The report documents the materials well and seeks to situate the archaeological record in the history of the chronology for the tell. Avissar provides a checklist for the chronology: archaeological evidence for a Crusader township, a century of use during the Mamluk period, and a mid-eighteenth-century fortress abandoned by the early nineteenth century.

Beyond ancient mounds, the rise of regional surveys—the examination of the larger landscape context for a tell—has proven beneficial for scholars interested in the Ottoman past. For instance, the extensive excavations at Troy have provided Ottoman archaeology with several publications. John W. Hayes (1995) documented the finds from an excavation unit in the Lower City of Troy. Similar to his work at Saraçhane in Istanbul (Hayes 1992), the catalog for the Ottoman Troad builds an understanding of material changes, as well as filling in the gaps for the pottery sequence created from the Istanbul excavations and analysis. Hayes's discussion of the Troy artifacts provides a benchmark for recognizing the transition from Byzantine to Ottoman rule via ceramics in the Troad. Beyond the ancient mound, Ayda Arel (1993) identifies an isolated tower on the plain of Troia as the remnant of the eighteenth-century farmstead of the Ottoman Grand Admiral Cezayirli Hasan Paşa. A 1776 engraving and detailed architectural study, along with Peter Ian Kuniholm's dendrochronological study of wood samples, fix the identity of the structure. Arel (1993:185–186) explains that the interior space of the tower is typical for the period, but the exterior indicates "an architectural sign of autonomy and authority," an anachronistic symbol of an earlier Ottoman politico-economic system. The use of past in the present is not unique to our social world.

The impetus for inclusion guides much of the collection of Ottoman-period materials across the region. Regional surveys in Greece and Cyprus now regularly include material culture from the recent past. Jack Davis (1991) recognized that archaeology could shed light on rural populations during the Ottoman period. Allaire Brumfield (2000), from a survey on the eastern part of Crete, provides a

history of agricultural practices and landowning patterns; a history from below that illustrates the variation in rural life during the Ottoman period. A large project during the 1990s, the Pylos Regional Archaeological Project (PRAP), systematically included all time periods for a large region of mainland Greece, thus including the Ottoman components. *Sandy Pylos* (Davis, 1998) reviews the Ottoman period (1460–1684 and 1715–1827), with its Venetian interruption (1686–1715), emphasizing the important military Battle of Navarino. The history is complex, including interventions by the Russian Catherine the Great and Muhammad 'Ali of Egypt, and scholars interpret the region as a "rich embroidery of Italian, Turkish, Greek, Albanian, and Western traditions" (Davis, 1998:252).

The events at Navarino have great historical significance and extensive documentary information. PRAP also examined the sites at the edges of history, such as Hasanaga, a village that otherwise is only a shadow in the documentary record. Hasanaga was probably a country estate, noted in the census and the accounts of travelers. The archaeologists mapped its surviving structure and courtyard walls and collected a sampling of artifacts. The archaeological project stopped at Greek independence, moving up the boundary for the proper domain of archaeology by several centuries. The amount of documentary resources explodes in size with the establishment of Greece; the need for material evidence fades with the wealth of detailed, documented insights into the region. The impressive scholarship documents the material remains, maps new places onto the landscape of Ottoman Greece, and wrestles with the textual traditions of the region's archaeology.

The stress on the documentary record is clear in *A Historical and Economic Geography of Ottoman Greece: the Southwest Morea in the 18th Century* (Zarinebaf et al., 2005). As a collaboration between two archaeologists and a historian, the authors acknowledge that the volume serves future archaeological projects rather than demonstrating innovative methodological intersections between texts and artifacts. It is worth noting that whereas the Ottoman Empire has extensive archives, there are many more documentary materials than scholars capable of translating and employing them. Thus, the publication of the imperial law code and the cadastral survey are important for the history of the eighteenth-century Morea, providing tremendous details on its cultural geography. The archaeology serves to illustrate points for the history. Even with this approach to documents and artifacts, PRAP is a showcase for intensive surveying and integrating of information, but as Davis (1998) makes clear in the volume's conclusion, the examination of the recent past and integration of multiple forms of data was a struggle.

The surveys of regions are opening up the study of the recent past. In the foothills of the Troodos Mountains, the Sydney Cyprus Survey Project (SCSP) during 1992–1997 systematically collected artifacts from all time periods, examined standing buildings and other features of the landscape, and recorded oral histories from contemporary residents of the survey area (Given and Knapp, 2003). One of the most remarkable consequences of the research design that included the post-medieval periods was the extent of material activity recognized by the project. The success of this volume radiates from Michael Given's (2000) commitment to a systematic, intensive, multidisciplinary approach to the post-Classic landscapes of Cyprus.

Most importantly, these survey projects never ignore that the inhabitants in the post-medieval period had material prosperity (unlike the Orientalist assumptions of decay and decline) or that they lived under Byzantine, Lusignan, Venetian, Ottoman, and British imperial rule. In exposing the activities of the survey area, Given and Knapp (2003) demonstrates the dynamics of life under empire; but the productivity and activities came under imperial rule, with its domination as well as its possibilities.

A recent contribution, edited by Siriol Davies and Jack Davis (2007) and titled *Between Venice and Istanbul,* continues a consideration of life under distant imperial control. The contributions delve into the Ottoman archives and the archaeological record, though not always together, to explore significant historical and social issues for Greece and Cyprus. The explorations of the documentary record changes in names and movements of populations bring out the complexity of regional settlement patterns. The meaning of Kütahya ceramics comes from a thorough review of scholarship and descriptions of the type. There is an important

critique of "empty landscapes"; archaeological surveys have located material evidence in regions that were considered nearly devoid of inhabitants. Along with those impressive insights into objects and settlements, the volume provides a methodology for texts, images, and archaeology that sheds light on Ottoman Greece and Cyprus.

New Questions and Innovative Approaches

For historical archaeology to be relevant in the eastern Mediterranean and the Middle East, studies need to integrate the documentary record and the material record in innovative ways. If the archaeology of the recent past is a handmaiden to history, there is little justification for the expense of excavations, analysis, and curation. The continuing challenge for historical archaeologists is to work with the research programs of other archaeologists and to match the concerns from the periods of antiquity with the data for the modern period. For instance, McQuitty (2001:561), in a chapter for *The Archaeology of Jordan,* notes that archaeological evidence for settlements, society, and economy—the themes of the volume—are "inconclusive and invisible" for the Ottoman period. McQuitty (2001) notes that several models are available to explore the Late Islamic period in Jordan. Notable among them are Jum'a Mahmoud H. Kareem's (2000) settlement-pattern analysis, Robin Brown's (1992) center–periphery model, and Øystein LaBianca's (2000) food systems model. Yet the study of Hajj forts, ceramic sherds, clay tobacco pipes, railroad stations, and the few buildings from the nineteenth century to the end of Ottoman rule does not match the concerns of the archaeology for the Bronze Age through Classical period in Jordan well. The challenges are not so much the nature of the rural population of Jordan during the Ottoman period as the questions being asked of the archaeological record, the documentary record, and their intersection. The archaeological record of the recent past requires new questions as well as innovative approaches.

Yet, as mentioned earlier, one of the major challenges for the archaeology of the Ottoman period remains identifying and organizing ceramics and other artifacts. Ziadeh (1991) provides typologies for Tel Ti'innik; for Greece, Joanita Vroom (2003) organized an even larger assemblage collected by field survey. With some 12,000 post-Roman sherds from Boeotia in central Greece, Vroom explored the problems of chronology and terminology for the recent past and constructed a chronological typology. Similar to the concerns in Israel, Vroom needed to collect information on production, distribution, and consumption, as well as to critically appraise previous considerations of ceramic types. Her efforts produced a masterful work. The publication is a foundation for archaeological studies of the modern periods in Greece and as a model for Ottoman archaeology across the Middle East. Yet, Vroom (2003) goes further in her study of ceramics. She explores, in the different types, shifts in foodways. For her study area, the political changes go from the Byzantine Empire to the Frankish period; the Ottoman Empire ruled from the late fifteenth century to nineteenth-century Greek War of Independence. Vroom (2003) argues for communal meals during the Byzantine based on ceramic evidence, texts, and paintings, a shift to individualism with western European Catholic control of the region, but, when the Ottoman Empire conquered Greece, there were again bowls for sharing food. For Vroom (2003), the modern period comes after World War II; the early modern period, a period of western influence as seen materially, occurs around the nineteenth century. Vroom (2003) and Carroll (1999) move beyond a simple critique of Orientalist assumptions regarding Ottoman history; instead of replacing the Orientalist decay-and-decline thesis with its opposite, their different studies expose a more complicated history with expansions and contractions, decline and progress. The material and social transformations of the Ottoman period require studies of diversity and variation.

That continuing search for variation is a key contribution of an archaeology of the Ottoman Empire. The successor states of the empire are nation-states that have mobilized the past to secure their present. Archaeology is illustrating that different social organizations existed in the recent past and that nationalist representations of antiquity and history can be misleading. In an example of such a critique, Charlotte Schriwer (2002:216) examined architecture

in Lebanon, Jordan, and Cyprus and concluded that "The Ottoman period buildings looked at in this study may have architectural elements and details which are labeled by many as being either Turkish, Greek, Cypriot, Lebanese, or Arab, but these identities appear, at least without more detailed evidence, to bear a weak ethnic relationship with the people who once lived there." Marking material culture—objects, architecture, or landscapes—as ethnic is a twentieth-century phenomenon, one that has divided the peoples of the region. Historical archaeology offers a different view of the social transformations that came with political changes and provides avenues to explore one of the contested issues of the region: the nature of modernity.

Modernity and modernization are the key issues of historical archaeology. There are productive debates that situate modernity as either imposed by western influence or created by the series of nineteenth-century Ottoman reforms known as the Tanizmat. Just as variation comes forward from integrating texts and artifacts, so too can the meaning of material culture and the built landscape. As discussed above, an Ottoman admiral's tower in the Troad provides insights into architecture as a symbol of authority; Lynda Carroll is offering insights into larger issues involved in the built landscape (Fig. 3). She (Carroll et al., 2006) has been researching the development and social meanings of large-scale farmsteads that resulted from changes in the Ottoman Land Code. The Land Code, part of nineteenth-century reforms of the empire, was an ironic failure. Such farmsteads are found across the region, for instance, in Israel on the Mount Carmel range. Hirschfeld (2000) documents Beit Khouri, a farmstead operated by a member of Haifa's elite. The central government meant the Land Code to protect peasants, but urban elite took ownership of large tracts of land and employed the peasants as agricultural workers. Beit Khouri is particularly interesting because it became one of the first Rothschild-funded Zionist settlements. A series of studies in the Balqa region of Jordan are exposing the implications of the transformation in land regulations (e.g., Walker, 2005). Unlocking the complex nature of landownership is a key to understanding the economic and social transformations in the region over the last few centuries.

While locating the local roots of modernity is a goal for scholars confronting the legacy of Orientalism, the external pressures and processes that transformed the Middle East need to be included in analyses. For instance, the opening to the west is a key phase in the scholarship of the nineteenth-century Ottoman Empire. The steady stream of visitors to the region from western Europe and

Fig. 3 An Ottoman-period farmstead in Hesban, Jordan, illustrates changes in the landscape that came about as mid-nineteenth-century land reforms facilitated the establishment of large farmsteads in rural areas of the empire (courtesy Lynda Carroll)

North America increased greatly with new transportation channels. Writings, paintings, and photographs recorded the region and its people, and they are sources for studying the Middle East. However, they are also components that constructed the modern Middle East. Baram (2007) employs the work of David Roberts, the famous artist who drew Egypt and the Holy Land in the 1830s, to illustrate how the western imagination constructed landscapes whose legacies continue to the present. The intersections of modernity, Ottoman reforms, travelers, and communities in the Middle East can, and should, employ a wide range of materials. Such landscape studies could contribute to understanding the formation of the modern Mediterranean world, a project fitting Braudel's (1973) vision for understanding change over time.

The challenge becomes clear in anthropological studies of material culture. An ethnographic study of pottery by Ioannis Ionas (2000) documents ceramic production from the end of the Ottoman period on Cyprus at 1878, when the British gained control over the island. The examination of Cypriot ceramics is thorough, documenting variation in styles, clays, potters' implements, forming and finishing methods, firing, organization of production, terminology, and the uses of pottery. Ionas links ceramics to ordinary and extraordinary functions, providing inventories of types and an engendered understanding of the objects. Ionas focuses on a disappearing craft, noting the need to fill the gap between the studied ancient forms and the products of potters in the recent past. *Traditional Pottery and Potters in Cyprus*, a useful volume that archaeologists can use as a field guide, celebrates a heritage acknowledged for its richness. Similar concerns guide the study of ceramics for Ottoman Palestine (see Salem 1999). Even more clearly in regard to memories and heritage, Nairouz's (2001) survey around Ramallah, in the West Bank, which focused on small stone dwellings called *qusur* built in the nineteenth century, explores landscape features whose meanings are fading from personal recollections. She employed documentary, ethnographic, and archaeological research to reveal the past cultural landscape of Ottoman Palestine. By identifying the *qusur* as agricultural installations, understandings of social and economic change in the region over the last several centuries are coming forward. Such archaeological studies document remnants of previous lifeways, allowing the present generation to remember its past.

These examples illustrate that historical archaeology is developing in ways that will situate material culture, documentary evidence, landscape studies, and archaeological analyses in local context. But the result is not local studies; implicit in much of the research is the global interconnections evidenced by the presence of clay tobacco pipes, Chinese porcelains, British ceramics, and western travelers, as well as Ottoman-produced and Ottoman-influenced goods and emigrants found around the modern world. The study of shipwrecks provides the clearest evidence of such connections.

Underwater Archaeology

The majority of archaeological research in the Middle East, as elsewhere, is terrestrial. Terrestrial sites for the Ottoman period are complex and multifaceted, and rarely have sharp demarcations from the earlier and later periods. Underwater archaeology offers a view on particular moments in time. In 1968, Raban (1971) uncovered a shipwreck off the southern tip of Sinai. The main cargo of this Ottoman ship was pottery vessels; nearly a thousand handleless flasks—an unidentified type among other ceramics—came from the wreck. More recently, and similarly from the northern Red Sea, Cheryl Ward (2000) has excavated a mid-eighteenth-century shipwreck. The ship sailed on the Red Sea, an Ottoman-controlled body of water. The impressive range of artifacts—more than 3,000 objects were recovered—includes Chinese porcelains and earthenware water vessels (Fig. 4). Cargo included coconuts, spices, and coffee. The Sadana Island shipwreck was just one of the eighteenth-century ships in the Red Sea that were part of the important sea routes north of Jiddah for elite-focused goods. Beyond the trade networks, Ward (2000) identified clay tobacco pipes and lamps used as personal items, the physical evidence of life aboard a trading vessel during the Ottoman period. The crew was Muslim and the ship likely a locally owned and operated vessel, carrying goods within the empire that were destined for the elite market. Ward's studies are conveying the complex movement of peoples and things during the Ottoman period.

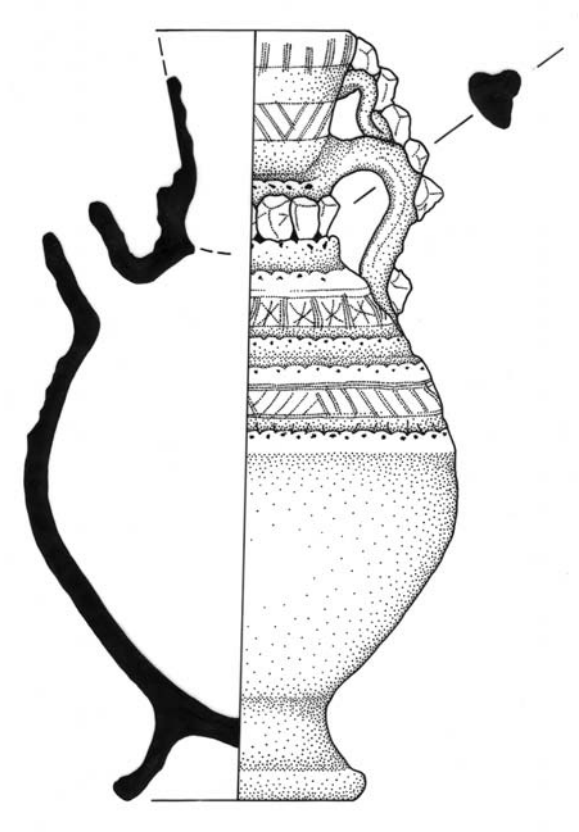

Fig. 4 A ceramic spouted jar recovered from the mid-eighteenth-century Sadana Island shipwreck. The jar is one of nearly 900 ceramic containers shipped as cargo on the Ottoman-period vessel (drawing by L. Piercy, courtesy Cheryl Ward and the Institute of Nautical Archaeology)

Underwater archaeology has also recovered evidence of western military intrusions. After Napoleon's defeat at Akko in 1799, his French troops marched to Tantura, a small harbor town south of Haifa. There, Napoleon waited for Admiral Perrée to help evacuate the French troops. The ships never arrived. Napoleon, realizing he would have to march back to Egypt, ordered the cannons buried in the sand or thrust into the sea. The weapons lay forgotten until the 1970s, when Shelley Wachsmann and Kurt Raveh (1984) recovered French muskets, cannonballs, and other equipment from the sea off Tantura as part of excavations at the ancient site of Tel Dor. On land, only flintlocks and a saber were located. The underwater search was more successful: a bronze mortar, made in Peru, with the Spanish monarch's mark and an Ottoman cannon. The description of both canons contributes to the history of military equipment; the tale of the Peruvian copper being made into a Spanish cannon and ultimately used by the French against the Ottoman Empire reads like a good mystery. While Wachsmann and Raveh (1984) situated the finds as a footnote to history at Tel Dor, the finds illustrate global connections and flows for the historical archaeologist. Underwater archaeologists have located even more of Napoleon's endeavor. The Battle of the Nile, or, more accurately, the Battle of Aboukir, was fought in August 1798. It pitted Britain's Sir Horatio Nelson against a French fleet led by Admiral François Paul Brueys d'Aigailliers. Napoleon's dreams ended at Akko and at the Battle of Aboukir. The details of the battle, the lives of the sailors, and the complexity of the recovered material culture convey the potential of the archaeology of the recent past for the Middle East, even for well-documented events.

Conclusion: The Future of Ottoman Archaeology

Historical archaeology in the Middle East is still in its emerging stage. Recent reviews (e.g., Schick, 1997–1998; Milwright, 2000; Baram, 2002) have gone beyond lamenting the lack of archaeology to expose the developments of ceramic typologies, published excavation reports, and synthetic diachronic landscape studies. Today, there are useful research tools for differentiating layers and sites and some important case studies to guide future research designs. Most prominent among those tools is Joanita Vroom's (2005) field guide, *Byzantine to Modern Pottery of the Aegean*. As a reference guide, field archaeologists now have a resource to which they can turn. The 16 diagnostic types for the Venetian to Ottoman periods and the 9 diagnostic types for the early modern era in Boeotia allow productive examination of published site reports. Archaeologists can take this framework and evaluate previous studies for differentiating the recent layers; fewer excuses are possible for ignoring the recent past because of this publication. Vroom's other work (e.g., 2003) illustrates how the typologies open research avenues for archaeological exploration of social change, regional variation, and the development of modernity.

The developments are moving in positive trajectories. It is becoming more common for scholars to incorporate the recent past in surveys of archaeologically based history. For instance, in a history of the battles of Jerusalem, the archaeologist Eric Cline (2004) integrates the Ottoman period for an important perspective on the major military events for that contested city. Such research is opening up questions and debates for historical archaeology. Furthermore, historical archaeologists can turn to a corpus of new studies on architecture, such as Andrew Petersen's (2001) *A Gazetteer of Buildings in Muslim Palestine,* detailed historical studies of cities, and geographic studies to open up possibilities for research questions that fall into historical archaeology's focus on the materiality of modernity. The larger goals of historical archaeology can be addressed with these materials and illustrate the transition to the present for the modern Middle East. Nevertheless, as this chapter started and Petersen (2005) emphasizes for Islamic archaeology in general, the archaeological study of the modern era in global perspective is political. Recovery, preservation, and presentation for the Ottoman period bring out social groupings that are now vanished (such as the Jewish heritage of Salonica, Greece), now in the minority (the Muslim heritage for southeastern Europe), or organized as oppositions rather than the coexistence or cosmopolitanism that characterized some of the recent past (in such places as Cyprus, Lebanon, and Israel).

The hidden histories of the Middle East, the types of histories that constitute historical archaeology's contributions to the study of the past, bring out a more socially complex Middle East than is extant in the early twenty-first century. The multicultural, multireligious communities of the Ottoman Empire are challenging to recall in the present, but a history from below for the recent past provides a contrast to the present nationalist homogeneity across the countries of the region and can help integrate the monuments and remnants of the Ottoman Empire found across the region's landscapes (Fig. 5). The possibility of using the recent past to locate shared histories drives some researchers, but the majority of the publications focus on documenting the artifacts recovered on the way to the goals for Classical and Biblical archaeologies. While the initial impetus for historical archaeology was political, in the recognition that the recent past could expose concerns and understandings for the deep social divisions of the region, now archaeologists across the region generally agree that the recent periods are as intrinsically interesting as are those of the distant past. There is much potential for scholars to integrate the growing materials into meaningful analyses and interpretations of the Middle Eastern past and situate the artifacts, assemblages, and cultural landscapes of the Ottoman period into a global context.

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Fig. 5 The imprint of the Ottoman Empire continues to dominate some Middle Eastern and eastern Mediterranean landscapes. The Süleymaniye Mosque hovers over Istanbul (courtesy Uzi Baram)

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